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Social Resilience in Cornish Fishing Communities

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Social Resilience in Cornish Fishing Communities

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Thesis in partial fulfilment for the degree of

DOCTOR OF PHILOSOPHY

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July 2017

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Author declaration

At no time during the registration for the research degree has the author been registered for any other University award, without prior agreement of the Graduate Sub-Committee.

Work submitted for this research degree at the Plymouth University has not formed part of any other degree either at Plymouth University or any other establishment. No work submitted for a research degree at Plymouth University may form part of any other degree either at the University or at another establishment.

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Abstract

Rural Cornish coastal fishing communities express, and have expressed, varying degrees of ability to develop and retain social resilience capacity, or the ability to withstand ‘shock’ over both ‘fast’ and ‘slow’ onset events in social, political, economic and natural domain terms ([Wilson, 2012a](#)). Endogenous and exogenous influences may include natural changes in resources and resource dependency resulting in the loss or depletion of community livelihoods associated with a decline in fishing activities ([Brookfield, 2005](#); [Marshall, 2007a](#)), issues of tourism driven change and notions of ‘community’. Four capitals are initially conceptually considered, those of natural, political, social and economic capitals driving institutional change and individual-community behaviour within fishing communities. This is considered for fishing activities and cross-community aspirational or extant forms of resilience building with a particular focus on social memory, community-personal identity ([Wilson, 2012b](#); [Wilson, 2013](#); [Wilson, 2014](#)) and critically, power ([Chaskin, 2001](#)). This research frames community resilience within a resilience framework on local, national and EU scales. The initial capital approach is further developed and articulated into a novel resilience status and process framework, the community resilience and vulnerability index, or the CRVI. The research fieldwork observes social resilience through empirical qualitative methods supported by an anthropological lens, especially in regard to social issues, trust, confidence, power and agency within fishing communities and trajectories that have been guided by internal and external influences and adaptive change to social networks. One of the research challenges was the building of the CRVI using coupled approaches to coping strategies that may have value both across the Cornish case study communities and into wider community usage.

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Grateful thanks are expressed to Professor Geoff Wilson for his unerring support and guidance in this research as principal supervisor and Andy Wheeler of the CFPO in Cornwall as an expertly informed and valued research partner. Also thanks to Dr Stephanie Lavau, Professor Mike Winter and Dr Federico Caprotti through their roles as secondary supervisors. Also thanks to the external examiner, Professor Mark Pelling and the internal examiner, Professor Ian Bailey for their valued critical and constructive evaluation and feedback in this research. Also, thanks are expressed to the research funders, the EU funded ESF/CuC who led an effective programme supporting broad interdisciplinary research informing many aspects of lived lives in Cornwall. Lastly, thanks to the residents and fishers of the fishing communities I was embedded in, who in many cases, invited me into their homes and lives.

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Glossary

CCC	Cornwall County Council
CDC	Cornwall Development Company
CFP	Common Fisheries Policy
CFPO	Cornish Fish Producers Organisation
CSR	Corporate Social Responsibility
CRVI	Community Resilience and Vulnerability Index
DEFRA	Department for Environment, Food and Rural Affairs
EA	Environment Agency
EU	European Union
EMFF	European Marine and Fisheries Fund
FEMA	Federal Emergency Management Agency (USA)
FOI	Freedom of information request (UK Government process)
FLAG	Fisheries local action group (EU funded - in UK)
ICES	International Council for the Exploration of the Sea
IFCA	Inshore Fisheries and Conservation Authorities
MAC	Mevagissey Activity Centre
MCA	Maritime and Coastguard Agency
MHA	Mousehole Harbour Authority
MHC	Mevagissey Harbour Charity
MMO	Marine Management Organisation
MSC	Marine Stewardship Council
NFFO	National Federation of Fishermen's Organisations
PAR	Participatory action research
PRA	Participatory Rural Appraisal
PDO	Protected Designation of Origin (EU)
PO	Producer Organisation
PRA	Participatory rural appraisal
Quota	The portion of the TAC allocated to a member state
RNLI	Royal National Lifeboat Institution
SeaFish	UK seafood authority
SES	Socio-ecological systems
SW IFCA	South Western Inshore Fisheries and Conservation Authorities
TAC	Total Allowable Catch
TTM	Transition Town Mousehole

1 Introduction

1.1 Background

1.1.1 Social resilience

The notion of resilience is gaining recognition academically as a societal development process area, and as a research field in its own right. At the same time, resilience is becoming a contested political and policy ‘buzzword’ spanning an expanding range of scales and contexts ([Pelling, 2003, p.18](#); [Wilson, 2012a, p.1](#)). Within this emerging field of resilience, there are numerous voices expressing multiple and contested interpretations and meanings ([Brown, 2014](#); [Brown, 2016](#)). Resilience spans several academic fields including studies referencing socio-ecological systems ([Adger, 2010b](#); [Adger, 2000](#); [Adger et al., 2005](#); [Berkes & Ross, 2013](#)), disaster-risk reduction research ([Matyas & Pelling, 2015](#); [Pelling, 2003](#); [Pelling & Manuel-Navarrete, 2011](#)) and human development studies ([Brand & Jax, 2007](#); [Brown & Westaway, 2011](#)).

The resilience concept has been used as a term for understanding the socio-ecological¹ system dynamics ([Folke, 2006](#)). In SES views, the ability for an ecosystem to endure stress from many factors is intrinsic to the concept of resilience. Resilience has strong roots in SES theory expressing resilience as a process or a characteristic of persistence to return to an original system state. The seminal ecological paper of Holling ([1973](#)) was a milestone in the conceptualisation of resilience. This was also an important precursor to later studies investigating resilience through social sciences, organisational sciences, psychology and

¹ Acronym is ‘SES’.

development studies ([Brown, 2014](#); [Brown, 2016](#); [CARRI, 2013](#)). From an SES perspective, resilience is expressed as a combination of adaptive capacity and transformation ([Adger, 2000](#)).

Resilience, in the social context, is the ability of human social systems to 'bounce back' after shocks or disturbances and to establish and develop coping strategies through social learning and self-organisation ([Adams, 1995](#); [Adger, 2000, p.56](#); [Willett, 2009](#); [Wilson, 2012a](#)). Unlike the original ecological concept, the 'social' resilience view does not support a predilection that a system will return to its original 'system state'. Social resilience encompasses processes such as adaptive capacity, anticipation, social learning, and social memory. The predictive capacity of social systems are very different from a simplified (and arguably reductive view) of resilience in natural ecological systems ([Adger & Vincent, 2005](#); [Folke et al., 2005](#); [Olsson, Folke & Berkes, 2004](#)).

The concept of social resilience is linked to natural, social, political and economic processes affecting communities. The ability to withstand shock from a tsunami event, for example, may draw upon all the resources, ingenuity and ability of a human social system to adapt to adversity and survive ([De Silva, 2007](#); [Rajkumar, Premkumar & Tharyan, 2008](#)). Social resilience is thus anthropogenically embedded in human survival through adaptive change and learning on a longitudinal basis ([Adger, 2000](#)).

Vulnerability² is observed as the antithesis of resilience in this thesis. Disturbances or shock may influence or stimulate either resilient or vulnerable behaviour, or may thrust a community into a new trajectory ([Wilson, 2012a](#)).

² Vulnerability (to who or what) is a pre-event state, quality, or characteristic of a social system that creates the potential for harm ([Cutter, 2008](#)).

Research on resilience has focussed on resilience capacity to withstand 'system shocks' as a normative beneficial quality. However many commentators have also argued that communities can benefit from major shocks through renewal, re-organisation and development ([Hopkins, 2008](#); [Wilson, 2015a](#)).

This study is concerned with the understanding of notions of resilience and vulnerability in selected Cornish fishing communities. It is hypothesised that the resilience of coastal fishing communities is weakened through increased multi-scalar and multi-factorial connectivity to other actors and institutions, multiple governance configurations, complex economic processes, and the impact of globalisation ([Wilson, 2014](#); [Wilson, 2015a](#)). It will be argued that these factors contribute to vulnerability and resilience in coastal fishing communities and may influence groups and individuals differently. Specific resilience factors (e.g. social networks) can be beneficial for one group of people but a vulnerability for another ([Brown, 2014](#)). Normative notions of resilience are thus problematic and contested in this study. Resilience can be a double-edged sword in resilience research ([Ledogar & Fleming, 2008](#)).

As a precursor to understanding resilient community dynamics, the contested concept of 'community' requires clarification in assessing community level social resilience. The word 'community' is derived from the Latin 'communitas' (cum, 'with or together' + munus, 'gift'), a broad term for a fellowship or an organised society. Communities may be local, dispersed, national or international and have wide degrees of variance in size and connectivity ([Chaskin, 2001](#); [Chaskin, 2008](#); [Wilson,](#)

[2012a](#)). The notion of community³ and its context in this research is discussed in further detail in Section 2.5.

1.1.2 Defining resilience in this research

In any study of resilience, it is important to highlight which definitions of resilience are being adopted. Three perspectives are compared here, perspective a) is an example of ecological resilience framing, perspective b) is that of an SES framed resilience concept and perspective c) positions resilience in a social resilience context highlighting the evolutionary development of resilience :

- a) “The capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks.”

[\(Walker, 2004, p.1\)](#)

- b) “The process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances.”

[\(Masten, 2001, p.1\)](#)

- c) “A multi-dimensional approach or the capacity of individuals, families, communities, systems and institutions to respond, withstand and or judiciously engage with events and experiences actively making meaning without fundamental loss of identity.”

[\(Almedom & Tumwine, 2008, p.2\)](#)

³ This research views the object of resilience (a community) as the totality of social system interactions within a defined geographic space, in this case at the village/town level. It is recognised that there are many different communities within such geographically defined spaces and sub-populations may indeed have different levels of vulnerability. Thus, this research is focussed on place and the interactions between the social natural, political and economic systems (or domains) within a geographically constrained area (see in particular [\(Cutter, 2008, Wilson 2012b\)](#)).

The understanding of resilience adopted by this study will be most closely aligned with perspective c) in the social context utilising notions of resilience processes described through both multiple scales and drivers. Resilience concepts utilised in this research are focused at the community scale and include adaptive capacity, vulnerability, community-level resilience, adaptation and social learning. These community-level resilience concepts are anchored predominantly within resilience theories in studies of disaster-risk reduction and the human development fields as well as some aspects of SES theory. Building on the early, socially orientated, resilience work of Adger ([2000](#)), social resilience is defined in this study as the ability of groups or communities to cope with external stresses and disturbances as a result of social, economic, political, and natural change.

1.1.3 Decline in community fishing

A reduction in community fishing activities driven by change in stocks, governance, competition and other constraints ([Brookfield, 2005](#); [Marshall & Marshall, 2007](#)) can drive social change and increase vulnerabilities e.g. loss of livelihoods, out-migration, gentrification in attractive coastal areas, government policy constraints and shifts to deeper water fishing. This may also drive a reduction in community resources, leading to declining opportunities ([Minnegal, 2003](#); [Robards & Greenberg, 2007](#)) along with increased poverty levels in often already deprived coastal communities. These factors pose severe risks to community resilience ([Marshall, 2007a](#)). Vulnerability may also be exacerbated as fishing skills are lost and infrastructure is repurposed for activities such as tourism ([Wilson, 2015a](#)). In addition, although subsequent longitudinal impacts on fishing communities may be

beneficial, loss of fishing may also lead to reduced social resilience, notably through increasing economic inequalities ([Adger, 2000](#); [Adger et al., 2002](#)).

Social impact in UK fishing communities (the geographical focus of this study) and associated community dependency is not driven solely by fishing constraints such as quota. Although fishing may be a significant factor, there are many other factors at play that influence community level resilience, the complexity of which is the crux of this research. Research in Scotland and the East Coast of the UK has highlighted the weakness of social objectives in EU fishing policy ([LiPuma, 1992](#); [Ross, 2013](#); [Ross, 2015](#); [Urquhart, 2011](#)). Community based coping strategies to address fishing decline adopted by some stakeholder groups may continue to support a 'virtual' fishing community, even in the absence of active fishing ([Brookfield, 2005](#)). Coastal fishing community impacts in the UK are also influenced by other factors such as e.g. other industries, increased poverty, and linked livelihood losses ([Bosworth & Willett, 2011](#); [Willett, 2009](#); [Williams, 2008](#)). Anthropological research in particular has highlighted the cultural embeddedness of fishing and fishers emphasising the resulting vulnerabilities and threats linked to loss of social identity, intergenerational skills and cumulative constraints to commercial fishing ([Acott, 2011](#); [Urquhart, 2012](#); [Urquhart, Acott & Zhao, 2013](#); [Urquhart & Acott, 2013](#)).

1.2 Research gap

This discussion has highlighted that there is a significant body of research on community resilience, exemplified by several studies (e.g. [Adger, 2000](#); [Wilson, 2012b](#)). However, several key research gaps were identified as follows.

Firstly, research into community typologies of resilience is lacking, especially in the case of coastal rural communities with varying levels of fishing dependence. Although many studies on agricultural communities have linked the adoption of diversification to increases in resilience ([Wilson, 2010](#)), little research has focused on fishing community resilience. An integrated approach is required to build links across a plurality of academic disciplines, including socio-ecological resilience and psychology. These consider adaptive relationships, community strengths and importantly in this research, the role of agency ([Berkes & Ross, 2013](#)). Previous work on community resilience has focused on perspectives of social and community resilience for both anthropogenically driven and 'natural' disturbances, for example in that of Wilson's Easter Island study ([2012a](#)). These studies form an important platform for this research of community change derived from natural resource dependency coupled to the onset (and rise) of coastal tourism activity.

Secondly, studies have considered social resilience in the context of disaster risk reduction and climate change, social learning, transformative⁴ change and its application in SES and governance ([Pelling, 2003](#); [Pelling, 2011](#); [Pelling & Dill, 2010](#); [Pelling & High, 2005](#); [Pelling & Manuel-Navarrete, 2011](#); [Pelling & Wisner, 2012](#)). Other studies have focused on both short and long term responses to climate change ([Adger, 2010c](#); [Adger, Arnell & Tompkins, 2005](#)) and culturally engrained economic practices, the role of traditional knowledge and the importance of self-organisation for resilience building ([Berkes & Jolly, 2002](#)). However, there continues to be a gap in our knowledge about specific factors and processes affecting the resilience of fishing communities. There are, nonetheless, some important studies focussing on understanding the resilience of fishing communities. For example,

⁴ The terms transformation and transition are used as interchangeable terms in this research denoting non-resilient state conditions that exist when absorptive and adaptive capacities have been exceeded. This can exist at many scales.

detailed research has been undertaken by Nadine Marshall in Northern Queensland, Australia, which utilises a broad typological approach to a range of social resilience factors in coastal regions ([Marshall, 2007b](#); [Marshall, 2007a](#); [Marshall & Marshall, 2007](#)). A parallel resilience study for communities on Queensland inland waterways has linked social resilience to community action in improving water quality ([Gooch & Rigano, 2010](#)). Other studies into fishing community resilience include rural fishing communities in Vietnam ([Adger, Kelly & Nguyen, 2001](#)) and research into community resilience agency ([Coulthard, 2012](#)), while vulnerability has also been researched in some small scale fishing communities ([Ebbin, 2009](#); [Symes, 2014](#); [Tuler et al., 2008](#)).

Research has also been undertaken into developing indicators of resilience in coastal fishing communities. Studies on global resilience constraints focussed on rural fishing communities were undertaken by Robards and Greenberg ([2007](#)). Although they studies are much lower in number than studies on the resilience of rural fishing communities, these studies have analysed traits and characteristics, social memory and learning processes, and are nonetheless valuable in this study. This is important as a framework for assessing community resilience capacities, including the influence of social memory associated with community development ([Wilson, 2012a](#)). The aforementioned research into the social resilience of commercial fishing communities of Northern Queensland ([Marshall, 2007a](#)) has highlighted the importance of both resource dependency, as well as occupational and place attachment in fishing communities. These studies show that identity is very specific to coastal fishing communities, particularly the identity contexts of fishers and their relationship with the sea ([Minnegal, 2003](#); [Minnegal & Dwyer, 2008](#)).

Despite the undeniable value of these studies, there is a distinct academic dominance of research into 'fast-onset' disturbances (e.g. sudden shocks through natural disasters) over 'slow-onset' changes (e.g. outmigration, economic recessions, infrastructure re-use) in fishing communities. As a result, there is a strong need to fill this gap, especially as all fishing communities are exposed to slow-onset changes that may affect their resilience and vulnerability ([Brookfield, 2005](#); [Marshall, 2007b](#); [Marshall, 2007a](#); [Marshall & Marshall, 2007](#); [Ross, 2013](#); [Ross, 2015](#)).

Thirdly and finally, and importantly from a geographical perspective, there is no specific research on the resilience of fishing communities in Cornwall (UK). Research has been undertaken involving Cornish fishing community cultural and ecosystem services as part of a larger European study, but this study did not specifically assess social resilience ([Urquhart & Acott, 2014](#)). Policy challenges and the perception of engagement is important in the perception of fishing community members in terms of feeling 'anchored' in their communities, and this may play a significant role in resilience building. Although fishing in Cornwall has declined as an economic sector, it still forms an important part of the character and, in some communities, supports the economic base of Cornish coastal communities. Yet, little is known about how Cornish fishing communities have responded to recent socio-economic challenges that may affect their resilience and likelihood of future survival as 'working' coastal fishing communities. In this context, this research is crucial for a better understanding of one of Cornwall's 'iconic' economic sectors and activities.

1.3 Aim and objectives

In addressing these gaps in our knowledge about the resilience of fishing communities, this study will not only shed light on levels of resilience of Cornish fishing communities, but will also provide valuable policy insights. This study will also benefit from direct and grounded stakeholder engagement. This research was funded by the CuC/ESF (Combined Universities of Cornwall and the European Social Fund) in collaboration with the Cornish Fish Producers Organisation (CFPO) in Newlyn, Cornwall. Key results will, therefore, inform knowledge of constraints and opportunities for the development and survival of Cornish fishing communities.

The aim of this study is, therefore, to analyse how social resilience in Cornish fishing communities is influenced by social, economic, political and natural change over long and short time scales. This study will focus on questions of resilience at the community level, where resilience is most commonly associated with well-developed capitals ([Wilson, 2012a](#)), namely economic (e.g. financial capital, infrastructure), political (e.g. power configurations), social (e.g. social memory, identity, networks, trust, governance) and natural (e.g. natural resources, fish stocks). It will be argued that in fishing communities where these four forms of capital are well developed, strong resilience will be present, while communities where these capitals are not well developed would often be vulnerable and show poorly developed adaptive capacity.

This research will focus on Cornish fishing communities, which provide a suitable case study for the analysis of community level resilience. The rationale for choosing Cornish fishing communities is three-fold. Firstly, fishing once formed one of the key economic sectors in Cornwall but has been in continuous decline since the 1950s being both policy-driven and linked to changing economic circumstances

([Bosworth & Willett, 2011](#); [Willett, 2009](#); [Williams, 2008](#)). Secondly, Cornish communities are among the poorest in the UK, and fishing communities have found it particularly difficult to adjust to changing livelihood pathways that steer away from fishing ([Willett, 2009](#); [Williams, 2008](#)). Thirdly, due to its tourism-oriented coastal spaces, Cornwall may provide more opportunities for multifunctional ([Wilson, 2012a](#)) (and, therefore, more resilient) activities than many other spaces in the UK ([Hale, 2001](#); [Willett, 2009](#)). The study will, therefore, contribute to geographical and social science theories of community reorganisation, social identity, social memory, alternative pathways of development and differential stakeholder interest in coastal fishing communities attempting to redefine themselves through eco-tourism, local food branding, and alternative economic pathways.

Using three case study fishing communities within Cornwall, the initial objectives of this study will be 1) to investigate links between livelihoods and resilience, 2) to assess the impacts of fishing activities on resilience, 3) to analyse the interlinkages between economic activities and resilience, 4) to investigate the link between social activities and resilience and 5) to discuss implications for resilience within and between the case study communities.

1.4 Structure of thesis

This thesis is structured into nine chapters, the first chapter being this introduction. The second chapter is a literature review that assesses resilience theory and develops a discussion on the importance of social learning and its implications for this research. Chapter Three explains the methodological design including a critical analysis of how design decisions were made, and why, followed by a critique of the implications of these changes. Chapter Four focusses on the

changing livelihoods of Cornish fishing communities from a mixture of primary resource dependent communities, supported by manufacturing, towards an economy with varying levels of tourism dependency. In Chapter Five, the importance of community fishing is analysed and explored in the case study communities painting a picture of fishing, infrastructure and social aspects of fishing at the community level and its importance in the resilience of these communities. Chapter Six analyses resilience and community economic activities, e.g. housing, poverty, multifunctionality and pluriactivity within each of the case study communities. This is further linked (through discussion) to notions of resilience and vulnerability. In Chapter Seven, case community 'social fabric' ([Huijbens, 2012](#)) is analysed with a specific emphasis on social networks and community events. The critical aspect of agency within these communities is also discussed in a resilience context. Chapter Eight brings together several strands of analysis from Chapters Five to Seven (inclusive) and discusses the implications of these findings on the resilience of the three case study communities with a novel resilience-centred focus on a) social learning, b) livelihoods and c) housing and services. Chapter Nine concludes the thesis through further discussion of slow-onset change, complementary aspects of sustainability, community 'uniqueness', future research and alternate approaches to resilience research through notions of status, longitudinal processes and transformation.

2 Literature Review

2.1 Introduction

This chapter will chronologically address the recent history of resilience through its physics and engineering roots from ecological and socio-ecological approaches (see Section 2.2) to contemporary thought on social resilience in Section 2.3 and social learning in Section 2.4. Criticisms of theoretical resilience theory are explored and clarified within these sections. In Section 2.5, 'community' as the object of resilience is discussed and assessed. Further notions of community are unpacked in Section 2.6 with particular reference to a novel Community Resilience and Vulnerability Index (CRVI) introduced in this research through observation and proxy. Finally, the implications and ramifications of these sections to this research are explored in Section 2.7. The research contributions of this thesis reside in three key areas.

Firstly, is that of a contribution of a novel resilience typology as a vehicle to provide substance to the concept of resilience in this research (e.g. [Brand & Jax, 2007](#); [Brown, 2014](#); [Handmer & Dovers, 1996](#)). The approach to this typology is 'hybrid' further described in Chapter 3 informing an indicator status 'fronted' assessment using proxy and secondary data as well as emergent and grounded field data. Such longitudinal proxy approaches have been adopted in longitudinal resilience studies ([Steenbeek & Hipp, 2011](#); [Wickes et al., 2015](#)). This understanding is discussed and built upon in subsequent chapters.

Secondly, there is a need to examine the value and appropriateness of using the three capitals model (see Chapter 1) in terms of strengths and weaknesses

([Buikstra, 2010](#); [Cutter, Ash & Emrich, 2014](#); [Madsen & O'Mullan, 2016](#); [Wilson, 2014](#)). This is critical in understanding the important issues of status, adaptation and transformation in resilience theory and practice examined further in Section 2.3 ([Béné, Frankenberger & Nelson, 2015](#); [Cutter, 2000](#); [Cutter et al., 2008](#)). State based analyses use 'snapshot' approaches to assess resilience drivers in socio-ecological systems and can expose social and ecological processes that can build resilience through adaptive and anticipatory capacity ([Folke et al., 2002](#)).

Thirdly, a further contribution is an evaluation of resilience as a useful approach or concept in examining status and the under-investigated phenomenon of slow-onset drivers of change ([Nelson, Adger & Brown, 2007a](#); [Wilson, 2012a](#)). Resilience theory has both strengths and weaknesses in its use in slow-onset resilience (and change) assessments. The use of resilience as a status view (a set of capitals evaluated at a point in time), in contrast to a continual process, is an important consideration in this research. One example of a resilience framework that uses state views is presented based on three process components ([Béné, Frankenberger & Nelson, 2015](#)). These are absorptive (persistence, e.g. risk management), adaptive (incremental adjustment through a capacity to learn, e.g. changing external drivers) and transformative (enabling conditions for systematic change, e.g. social protection mechanisms, social revolution).

These three components can represent a combination of measured state capacities through the three processes and also expose underlying processes. Such an approach is strongly influenced by contextual factors such as political and cultural conditions ([ibid.](#)). Importantly, and linked to this, responses to shock and stress through adaptation or transformation may not necessarily produce a 'good' outcome to the community or individual undertaking the adaptation. Béné ([ibid.](#)) suggests that

resilience strengthening is not simply about labelling coping strategies as 'bad' or 'good' as this view is too simplistic, mechanistic and a consequence of linear thinking. For example, Béné ([ibid.](#)) describes a family that has adopted a migratory strategy to escape saline incursion, finding work and setting up a home in a different country. This family may have very different outcomes to another family adopting the same basic strategy and where e.g. the head of household fails to find a job. The outcomes for this family might be very different from this second family although the 'initial' coping strategy was similar to that of the other but some parts of the process were not the same for both families. This is termed as 'maladaptation' in resilience literature ([Béné, Frankenberger & Nelson, 2015](#); [Black et al., 2011](#)). Thus negative outcomes can stem from 'positive' adaptation strategies and adaptive change should not be regarded as a panacea i.e. uncertainties are always present. Another example of maladaptation is that of an example of the implementation of dike systems to reduce flood exposure by offering immediate protection, but this may also encourage settlement patterns that reduce resilience and increase risk in the long term ([UN, 2012](#)).

Resilience is concerned with strengthening the capacity of scales of society to have a portfolio of options to select the 'right' response for them, in context, and at the 'right' time, rather than being obliged to select from constrained options. This is referred to as 'adaptive capacity' in resilience terms and is a key aspect of this research, especially through plurality in its adoption ([Béné, Frankenberger & Nelson, 2015](#); [Constas, Frankenberger & Hoddinott, 2014](#)).

Community resilience implicitly means that not all threats can be avoided. However, mechanisms can be put in place to minimise 'disturbances' at the community level ([Sharifi, 2016](#)). Nonetheless, disturbances can also benefit

community resilience through changes that challenge 'lock-in' or status ([Wilson, 2012a](#)). Further, one person's resilience can be another's vulnerability which is a critical issue in respect to 'objects of resilience' in policy setting ([Brown, 2014](#)). Confounding issues are thus intrinsic in resilience thought and its use in 'wicked' social challenges and uncertainties ([Ross, 2010](#)). Following on from this conceptualisation of resilience, the 'evolution' of resilience thought is now examined.

2.2 From ecological to social resilience

The purpose of this section is to describe and analyse the evolution of resilient thought from ecological resilience through to social resilience in a community context with a view to framing social resilience in this study. The concept of resilience 'disturbance', 'shock' and change will be assessed linked to 'fast and slow', and complex, multi-scalar and nested adaptive systems such as 'panarchy' ([Gunderson & Holling, 2002](#); [Holling, 2002](#)). The limitations and constraints of these systems-based theories are discussed in respect of modern resilience thinking to critically assess social system dynamics and notions of reductionism.

Interdisciplinary resilience can be described through boundary-object contexts, as well as tipping points, cross-scale impact and their relevance to observing and analysing resilient behaviour ([Brand & Jax, 2007](#)). Distinctions can be drawn between the ecological use of resilience and its use in assessing human agency within social resilience theory. In this research, resilience is envisioned (initially) through the relative conceptual 'balance' of four capitals (natural, political, social and economic).

The term, 'resilience' has been adopted within many academic disciplines, including the fields of social and ecological sciences, development studies, psychology, and extensively in interdisciplinary climate change research ([Adger,](#)

[2010b](#); [Pelling, 2011](#); [Pelling & Manuel-Navarrete, 2011](#)). Notions of resilience are increasingly being used in the political arena ([Brown, 2016](#); [CARRI, 2013](#)). A complex set of contextual terms has evolved to describe resilience grounded within, and across, multiple disciplines ([Brand & Jax, 2007](#); [Davidson, 2010](#)). 'Resilience' in the context of this research denotes human versatility to adapt to, and tolerate, adverse physical and psychological events spanning significantly varied temporal periods. Wilson ([2012a](#)) describes resilience as a concept that transcends both the natural and social sciences, and, further, that the field of human geography provides an ideal vehicle in which to study resilience. Research into 'fast' and 'slow' onset resilience, i.e. the building of resilience or vulnerability in both short and longer term timescales offers an interesting research platform.

The concept of resilience can act as a vehicle to describe an individual, a community, a natural ecosystem or indeed social and political conceptualisations at multi-scalar levels of connectivity. It is highly context dependent, for example, in its use in ecological ([Holling, 1973](#)) and psychological terms ([Masten, 2001](#)) but relies on a common general view of the ability to 'bounce back' by building resilience as a process or as a characteristic and in the case of human society, implies anticipatory and forecasting abilities ([Magis, 2010](#)).

Resilience is a common theme derived from e.g. a) socio-ecological b) psychological and c) international development disciplines respectively ([Brown, 2014](#)). The differences between approaches can be attributed to the focus of the specific disciplines. For example, a socio-ecological view as in a) may look at anthropogenic resilience relationships coupled to non-anthropogenic natural systems whilst a psychological aspect as in b) might look at human thought and behaviour. The adoption of a high-level conceptual view of resilience also describes adaptive

capacity and other survival and coping strategies. This suggests that resilience has the potential to be a powerful agent to facilitate interdisciplinary work ([Wilson, 2012a, p.50](#)).

As described earlier, the concept of resilience has become an active and hot topic across many spheres of society, namely those of political, media, government and the academic arenas. Resilience has been adopted within climate change research and is a valuable tool for describing the integrity and complexity of coupled socio-economic and natural systems ([Adger, 2000](#)). Thus, resilience thought encompasses a significant and increasing body of knowledge, offering promising prospects for building a better connected and holistic perspective to encourage improved and sustainable policy making.

Engineering origins of resilience

One notion of resilience was envisioned in the field of mechanical engineering to express notions of robustness, e.g. the ability of a bridge to withstand a hurricane to the point where it might lose its structural integrity and collapse, a 'tipping point' beyond its resilience capacity ([Gibbs, 2009](#)). However, the term has become adopted in many disciplines at various times.

Ecological resilience

The concept of resilience has been taken up by ecologists as a term to describe how natural biological systems persist ([Folke, 2006](#)). The ecological usage of the word may have stemmed from its original physical sciences connotation. This ecological usage of the word denotes an ability to retain integrity in system terms, e.g. the ability of trees to withstand saline incursion while still maintaining a hold on an ecological niche. This is associated to an ability to withstand shock and impact by disturbance (or perturbation) from exogenous and endogenous influences nevertheless maintaining the same relationships between 'state variables' and populations ([Brand & Jax, 2007](#); [Holling, 1973](#)).

A 'tipping point, or the situation at which natural change has influenced a system to the degree at which an equilibrium change to another 'state' must occur, is perceived as 'the maximal lowest point of a communities domain of attraction' ([Holling, 1973](#)). This is the point at which an ecosystem (in ecological resilience terms) is likely to enter into a new phase or succession due to natural or other drivers. This may allow a new species to dominate an ecosystem niche, potentially leading to the extinction or a reduced dominance of the extant dominant species. Ecological resilience may be anthropogenically enhanced or negated e.g. by the adoption of intensive agricultural practices or by 'natural' processes such as adaptation of species to habitat changes. Temporal scales are also important for 'slow-onset' events e.g. desertification or 'fast-onset' events e.g. loss of habitat by tsunami or earthquake events ([Wilson, 2012a, p.78](#)). The differentiation between 'natural' background and anthropogenically forced environmental change is a critical

aspect of many environmental debates, including climate change events and is an important feature in global governmental responsibilities in the 21st century.

Ecologically 'open' and 'closed' systems differ in the ways in which they can interact with other environmental scales. There are substantial limiting factors constraining a 'closed' system and it is important to understand the scope of interaction both within, and between, systems. This can also be applied to engineering resilience as 'closed systems' e.g. the fixed body of a bridge is constrained in its limited exogenous interaction. An open ecosystem, such as the ocean or a savannah environment, has little in the way of constraint except that between land, sea and air. Indeed, when considering deep ecology theory and holistic science ([Naess, 1988](#); [Roszak, 2003](#)), Earth may be viewed as a single ecosystem framed in interdependencies and interconnectedness that project across many scales which may not be obvious or transparent. Thus, there is a drive to view resilience in holistic terms as an interconnected and interdependent set of systems. Resilience in socio-economic-environmental systems requires multi-level analysis to further understand the 'embeddedness' and dynamics of multiple systems ([Walker, 2004](#)) and is problematic in this context.

This ecological resilience concept was enhanced to encompass strongly complex and adaptive systems influenced by the cross-scale morphology of ecosystems ([Cumming, 2005](#)). The ecosystem (or ecological resilience) framework devised by Holling ([Holling, 2002, p.63-102](#)) was comprised of three basic elements, the domain of attraction, the adaptive cycle and cross-scale effects. These extended aspects of ecological resilience included the capacity of a system to absorb shocks, maintaining function, structure and feedback loops in ecological 'identity' terms ([Walker, 2002](#)). Further work undertaken by Holling ([2001](#)) and others towards this

extended view of ecological resilience was described in the much cited paper of Walker ([2004](#)). Walker described the concept of multiple ‘basins of attraction’ described earlier as regions in state space in which a system tends to remain, in contrast to entropy.

Building on this ecological resilience theory approach came the novel concept that resilience might be interpreted as ‘the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks’ ([Walker, 2004, p.1](#)). The meaning of change in the context of ecological resilience, as previously mentioned, may be anthropogenically driven (or not) and may constitute many types of change from localised scale change to larger physical scale changes within varying timescales. A novel concept was required to describe these dynamics. Holling generated the idea of an adaptive-heuristic model to capture relationships in an inductive manner ([Holling, 2002](#); [Scheffer, 2009](#)). This heuristic-adaptive cycle (Fig. 2-1) was originally adopted to interpret the dynamics of complex ecosystems in response to disturbance and change.

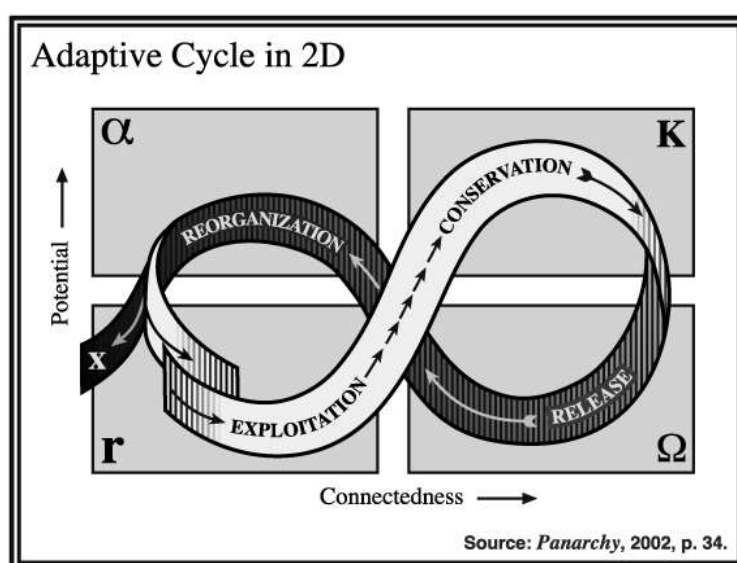


Figure 2-1 : Heuristic-adaptive cycle - Source : ([Gunderson & Holling, 2002, p.34](#))

The adaptive cycle (Fig. 2-1) expresses four phases of development. Because of cross-scale interactions, the resilience of a system at a particular focal scale will depend on the influences from states and dynamics at scales both above and below. Providing there is interaction across the scales, a crisis or adaptive variance on one level can trigger the dynamics of both smaller and larger scales ([Davidson, 2010](#)). This heuristic approach is concerned with the ability to act through learned experiences. Two schools of thought evolved in the utility of the adaptive cycle: those who treated it as a conceptual tool and those who saw it as heuristically orientated 'self-learning' model ([Gunderson & Holling, 2002](#)). The importance of the cycle in this study is to highlight resilience thinking processes driven by self-organisation and cross-scale drivers. This embodies many theoretical approaches including ecology. This is of conceptual relevance when applied to social systems. However, social systems are heavily influenced by human agency and actor anticipatory abilities and this is key in this research.

It has been suggested that resilience based research is not so much as a theory but a collection of ideas about how to interpret complex systems ([Wilson, 2012a](#)). The historical evolution of resilience thought features the heuristic-adaptive cycle that has historical and contemporary prominence.

The heuristic-adaptive renewal cycle was built upon from studies of the dynamics of primarily productive and self-organised ecosystems which was later developed into the 'panarchy' ([Cumming, 2011](#); [Gunderson & Holling, 2002](#); [Holling, 2001](#)). This multi-scalar system, 'panarchy' (Fig. 2-2) evolved as a response to the need to assess complex, embedded, multiple ecosystems. Panarchy can be conceptualised as an integrated multiple nested set of linked heuristic-adaptive cycles. Two linked cycles representing a panarchy are illustrated in Fig. 2-2.

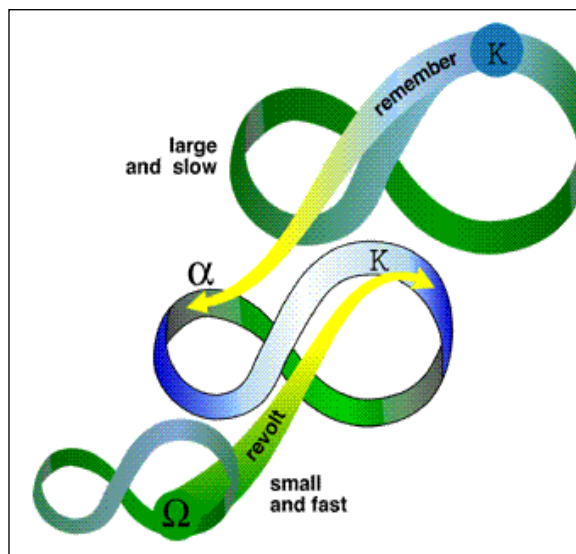


Figure 2-2 : Panarchy - Source : ([Gunderson & Holling, 2002, p.34](#))

Panarchy is a view of ‘nested’ multiple adaptive cycles from a ‘multi-system’ perspective. One or more of these adaptive cycles are coupled together into a singular integrated system constrained by persistence and accelerated by non-linear change in Fig. 2-2 within these complex adaptive cycles. Importantly, the ‘nested’ description denotes multiple occurrences of the cycle depicted in Fig. 2-2 with cross-cycle linkages creating dependencies between multiple cycles. Panarchy can be usefully adopted in institutional resilience assessment and provides a useful descriptive model ([Pelling & Manuel-Navarrete, 2011](#)). As an example to describe panarchy further from Figs. 2-1 and 2-2, the large and slow cycle might denote e.g. government policy change while a small and fast cycle might be e.g. local government.

These cycles may exist at both multiple scales and adopt multiple temporal and scalar thresholds triggering change. The non-linearity and uncertainty of adaptive systems may result in complex outcomes ([Barton, 1994](#)).

This expands the previous hierarchical view of a single system into dynamically linked sub-systems with multiple scales of integration. A good generalised example of this is the global ocean-atmosphere physical environment. Processes in the deeper ocean tend to be large and slow, taking place over millennia timescales. In comparison, atmospheric dynamics tend to be fast and localised and events are measured in days and weeks. However, as a single linked 'multi-system', they heavily influence and drive each other and can be described at the conceptual level using the 'panarchy' model.

Panarchy is a concept that helps to articulate notions of multiple scales and the inter-dependencies across these scales. However, panarchy, it is suggested by academics ([Berkes & Ross, 2016](#)), may not fulfil the promise we have been led to believe in. Panarchy may not be the neat solution to conjoin these levels of socio-ecological systems due to the inherent complexity in their interaction. Trade-offs, such as loss of pluriactive options and the introduction of livelihoods through wider scales and complexities such as seasonality and globalism can be usefully described through notions of panarchy. However, the use of panarchy as an analytical 'tool', especially in underpinning policy ([Berkes and Ross, *ibid*](#)), is in itself fraught with problems and the complexities of causality. The 'nested' adaptive cycle depicted in Fig. 2.2 illustrates that the 'remember' (or institutionalised) 'K' aspect of the cycle is large and slow change whilst the 'revolt' (or scattered) 'Ω' component is small and fast. The 'α' (mobilized) and 'r' (polarised) components form the other components of the nested heuristic panarchy cycle. It has been suggested that, in terms of resilience dynamics, that an ideal 'state' of resilience lies in the intersection of all these components where there is a plurality of values framed in a facilitating and flexible set of e.g. institutions in SES terms ([Pelling & Manuel-Navarrete, 2011](#)).

Further, in consideration of the practical application of panarchy in e.g. political actor activity, this may be an uncomfortable political notion, with increasing uncertainty and short term costs traded off against enhanced flexibility ([Pelling & Manuel-Navarrete, ibid](#)). Panarchy also features in notions of adaptive cycles such as the 'Circular Economy' utilising cross-scale dynamics in city planning ([Becqué, 2014](#)).

The adoption of actor agency in the social context demands close examination of assumptions when using panarchy concepts in the social context. The human condition can predict, anticipate and therefore pre-empt behaviour in these types of cycle as previously discussed ([Holling, 2002, p.20](#)).

An understanding of three notions of resilience within the ecological systems area, namely, engineering resilience, ecological resilience, and adaptive resilience has been considered ([King, 2008](#)). King ([ibid.](#)) applies these notions to building resilient communities and the development of resilient agri-ecological systems (e.g., eco-villages, farmers' markets, and community-supported agriculture, permaculture and community gardens). These connect people with people, and people with food and the environment. The 'three characteristics of resilience' model was developed that described resilience in component terms, that of the ability to absorb disturbances, to self-organise and to build capacity for learning and adaptation.

Challenges and conceptual weaknesses arise through the behaviour of complex systems that encompass more than one attractor, which is the case in socio-ecological systems. Unpredictable shifts can occur with one or many types of perturbation and with a predicated non-linearity, this is again associated with the anticipatory nature of human agency ([Holling, 2002, p.63-102](#)).

The concept of 'resilience' is used in many disciplines, and, prior to discussing its application in the wider academic field, it is prudent to identify the use of the term

from several important theoretical perspectives. The use of resilience as a boundary object as well as its use in descriptive terms is discussed to ensure its two conceptual uses are differentiated ([Brand & Jax, 2007](#)).

The first 'face' of resilience, the descriptive facet, discounts normative aspects of resilience as descriptive and non-equilibrium, wherein resilience may be viewed as beneficial or detrimental depending on the viewpoint. An example of this is a human intervention towards fire prevention in forest ecosystems. Many plant species require fire to stimulate reproduction and actively preventing fires can prevent some species retaining their ecological niche in an ecosystem. The descriptive aspect of resilience lends itself to notions of power configurations and self-interest within many scales of agency. Resilient behaviour in one domain may lead to a loss of resilience in another domain.

The other facet is that of resilience as a 'boundary object', framed conceptually across disciplines such as psychology, sociology and ecology. A 'boundary object' has specific detailed contexts or meanings in different academic communities but is characterised by maintaining a common general meaning across these communities. It may have a degree of flexibility but is sufficiently immutable to allow adoption across disciplines in an interdisciplinary context. Thus, such a term can act as an interdisciplinary 'bridge' to assist communication and exchange of thoughts between disciplines ([Brand & Jax, 2007](#); [Wenger, 2000](#)). Resilience theory formation may thus have commonality across disciplines and gain synergy from interdisciplinary efforts. A boundary object might also be viewed as a vehicle for coordinating groups of communities to allow collaboration towards a common goal ([Wenger, 2000](#)). This facet can be viewed in a negative light when considered in ecological systems as an inhibitor of scientific progress due to its non-quantitative

orientated approach ([Brand & Jax, 2007](#)). The next 'stage' of the evolution from ecological resilience is that of socio-ecological resilience.

Socio-ecological resilience

Socio-ecological resilience, as described previously in relation to ecological resilience, does not prescribe a general 'state' maintenance :

“Social-ecological resilience is defined as the capacity of social-ecological systems to absorb recurrent disturbances so as to retain essential structures, processes and feedbacks.”

([Adger et al., 2005, p.1037](#))

Socio-ecological systems are influenced by disturbance normatively. Some theoretical approaches portray three outcomes from disturbance, firstly, resilience, secondly, adaptation and finally, transformation ([Davidson, 2010](#); [Folke, 1998](#); [Folke et al., 2010](#)). This is known as the 'D:RAT' concept. This normative view of resilience theory is convincingly challenged by Adger ([2000](#)) who argues that resilience theory, in itself, does not have a normative dimension and that to understand resilience in a normalised sense, other concepts need to be adopted to gain an enhanced holistic view ([Leach, 2008](#); [Leach, Scoones & Stirling, 2010](#)).

Further a resilience approach may have two distinct levels, 'general' and 'specific' respectively ([Adger, ibid](#)). Specific resilience refers to a specific response to disturbance (e.g. an individual) whilst general resilience considers the implications at a higher scale (e.g. a community) ([Rigg, 2011](#)).

Progression in resilience theory approaches in recent years includes a set of seven principles that have been identified for building resilience and sustaining

ecosystem services in social-ecological systems: 1) maintaining diversity and redundancy, 2) managing connectivity, 3) managing slow variables and feedbacks, 4) fostering complex adaptive systems thinking, 5) encouraging learning, 6) broadening participation, and 7), promoting polycentric governance systems ([Biggs et al., 2012](#)).

It can be construed that factors leading to the promotion of resilience or vulnerability may be both nebulous and significantly informed by the positionality of the observer. This raises significant normative questions focussing on the ‘recipients’ of resilience and thus notions of who is the real ‘beneficiary’ linked to issues of self-interest and power configurations ([Brown, 2014](#)).

Fig. 2-3 shows a conceptual model of resilience scale from individual to global.

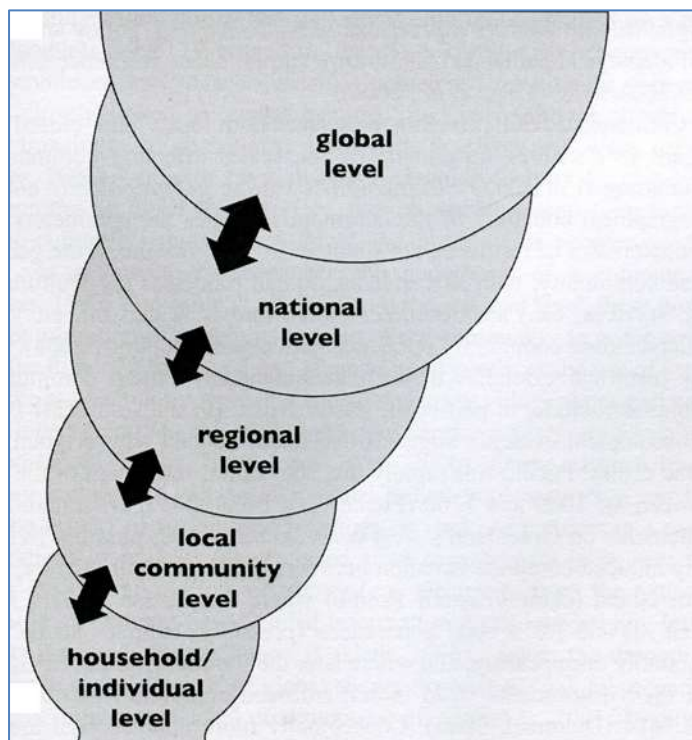


Figure 2-3 : Resilience and notions of scale – Source : ([Wilson, 2012a, p.39](#))

This concept of scale is of critical importance in resilience research. Wilson proposed this five level resilience scale (see Fig. 2-3), e.g. a) global ([e.g. Brown, 2016](#)), b) national ([e.g. Cork, 2010](#)), c) regional ([e.g. Crespo, Suire & Vicente, 2014](#)), d) community (e.g. [Berkes & Ross, 2013](#); [Berkes & Ross, 2016](#); [Kelly et al., 2015](#); [Magis, 2010](#); [Wilson, 2012a](#)) and e) household-individual respectively ([e.g. Paris, 2008](#)). This demonstrates a less indirect level of community resilience moving from local to global ([Wilson, 2012a](#)).

The adoption of resilience in sociological terms was proposed in the early 2000s to include groups, or communities of people associated with their ability to cope with external disturbance and stress driven by social, political and natural change ([Adger, 2000](#)). Adger ([ibid.](#)) first linked ecological resilience theory and embedded it into social theory through his coastal community studies in South East Asia ([Adger, Kelly & Nguyen, 2001](#)). He observed the concentration of human populations along coastlines in terms of the impact of extreme natural events, theorising the diversity necessary for socio-ecological resilient systems linked to exposure, sensitivity and adaptive capacity. He also theorised that resilient socio-economic systems might incorporate diverse mechanisms to both cope with, and learn from, thus potentially building social benefits from change and environmental shock. He also postulated that multi-level governance systems might enhance coping capacity through the adoption of diverse and multiple sources of resilience (and equally, multiple potential sources of vulnerability) ([Adger et al., 2005](#)).

An increase in vulnerability (e.g. community collapse after a major event such as a tsunami) increases the probability that a given regime will need to self-organise, adapt, or transform into a new regime. Thus, a revised view might characterise a

system as not being held at a climax state but undergoing a self-organised evolutionary process as described earlier ([Davidson, 2010, p.1137](#)).

Human agency is a prime consideration in socio-ecological systems in relation to any adaptive-heuristic framework. Human agency influences system models in terms of linearity from several different stances, primarily from the ability of humans to anticipate and manage disturbances and influencing possible outcomes when considering the conceptual 'D:RAT' model discussed earlier ([Davidson, 2010](#)). The boundaries between the three types of response can, and do, overlap in reality, especially in consideration of 'multiple resiliences' ([Ungar, 2011](#)) and their interdependencies. Human agency "defines an element not present in ecological systems, and consequently not reflected in ecological theories of resilience" ([Davidson, 2010, p.1142](#)). This is of significant importance when considering anthropocentric and anthropogenic influence and opportunity for change and development ([Hopkins, 2008](#); [Rotmans, 2009](#); [Wilson, 2012a](#)). Anticipation is a very important 'game changer' in such conceptual modelling theories. Ecological resilience research output has declined in recent years and it is the evolution of socio-ecological resilience thought which has dominated research output moving towards a social resilience agenda in resilience research ([Brown, 2014](#)).

The scope of agency in resilience is that of both individual actions from members of society (who may be driven by the belief that change really is an achievable outcome), and from the actions of a collective society who may be driven by community leadership and drive stemming from the individual. Thus, collective agency may be enabled through communications, beliefs, infrastructure and, importantly, a culture to drive change at the societal level ([Davidson, 2010](#)). This resilience discussion now moves to the sphere of social resilience.

2.3 Social resilience

This research, as discussed, initially considers four types of capital to frame resilience, namely social, political ([O'Connor, 2006](#)), natural and economic capital as a conceptual core of social resilience (see Fig. 2-4).

Wilson ([2012a](#)) proposed that the conceptual space that forms the intersection between these capitals is that of resilience and argues that there is little extant research between community resilience and the different forms of human and natural capital.

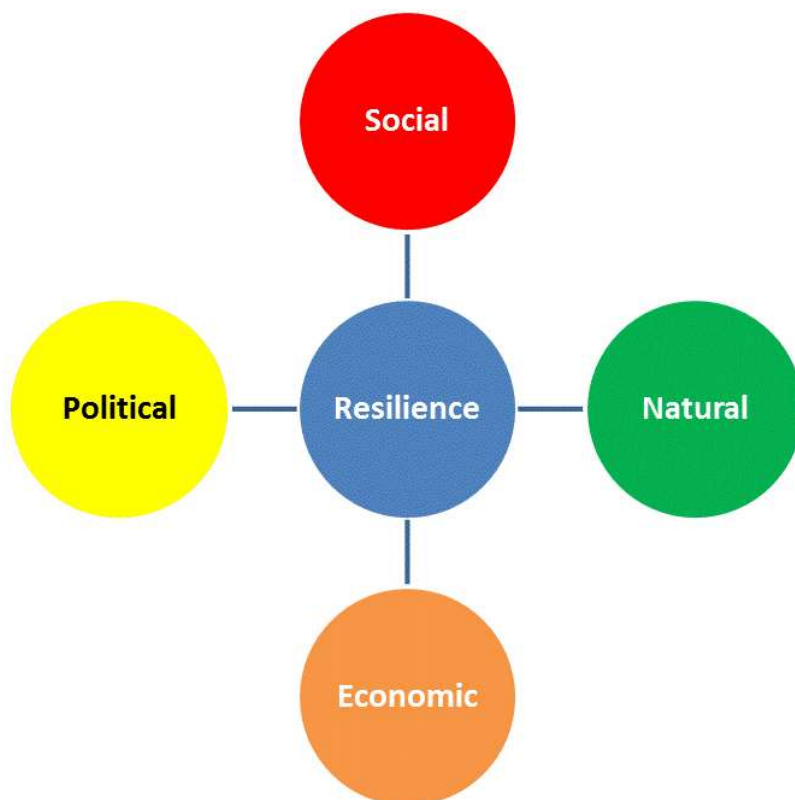


Figure 2-4 : The 'Four Capitals' - Source : adapted from ([Wilson, 2012a, p.40](#))⁵

⁵ Wilson proposed three capitals (political capital was omitted at this time but included in later work).

Wilson ([ibid.](#)) and Adger ([2011a](#)) also indicated that the concept of scale is critical (see Fig. 2-3) regarding community resilience and that community resilience may be in general decline through globalised pathways of decision making :

“Any evaluation of resilience requires careful consideration of the scale of analysis and the relationship between local and larger scales of resilience.”

([Adger, 2011a, p.764](#))

Jansen ([2006](#)) marks an important perspective as resilience is not, in itself prescriptive, and is process orientated, rather than a singular (and thus atomistic) approach. This is a crucial change in emphasis in resilience theory conceptualisation. As mentioned, social systems have a characteristic propensity not to return to their original state due to multiple factors including complexity, anticipation, social memory and variable and complex exogenous drivers such as globalisation ([Adger, 2000](#); [Cumming, 2005](#); [Gooch & Rigano, 2010](#); [Magis, 2010](#); [Rotmans, 2008](#); [Rotmans, 2009](#); [Shove & Walker, 2007](#); [Tidball et al., 2010](#)).

Social resilience is also dependent on the underpinning institutions that govern social systems. Resilience is institutionally governed in part and may have proxy indicators of the presence of resilient activity and practice at the institutional level. Adger ([2005](#)) observed that potential proxy indicators might include the stability and distribution of income amongst populations as well as environmental variability, suggesting that social resilience is linked to community stability, and particularly to livelihoods. The undermining of common property institutions (often from a globalisation perspective) is perceived as a vulnerability in social resilience by reducing the ability of a community to withstand external shock ([Adger, 2000](#)). Globalisation is important in understanding exogenous forces in community research

embedded within multi-scalar issues, from local to global. This planetary level resilience continuum from local to global was described by Rigg ([2011](#)) :

“Local resilience, therefore, cannot be disentangled from global understandings of resilience.”

([Rigg, 2011, p.18](#))

Approaches to the research and management of these cross-scale linkages include ecosystem-based management, adaptive management, participatory rural appraisal (PRA) and participatory action research (PAR). These are important methodological considerations further discussed in Chapter 3. Resilience theory thus provides a window, or a lens, into the study of change, emphasising learning, self-organisation and adaptive capacity ([Ostrom, 2009](#)).

Social system stability might also be an underpinning factor in innovation and technological advancement. This is particularly appropriate to this research in terms of identifying resilience indicators directly, or by proxy e.g. population change. As a response to significant external stress, population displacement portrays a significant breakdown of social resilience likened to transformation ([Adger et al., 2005](#)).

Adger et al ([ibid.](#)) argue that social resilience can be defined as the ability of communities to withstand exogenous shock to their social infrastructure. This is analogous to the socio-ecological resilience typology in some respects, but excludes endogenous shock impact and is particularly relevant in resource dependent communities ([Marshall, 2007a](#)).

However, Adger ([ibid.](#)) maintains that it is erroneous to assume that it is resource capacity that is the prime factor in building resilience. He deems it indeterminate as to whether communities dependent on coastal resources are

inherently more resilient, having stresses from social, economic and political influence as well as natural pressures. He also maintains that social resilience remains central to sustainable development as a critical and debatable issue. Again, these capitals are very appropriate to the social groups under study, that of Cornish coastal fishing communities. These capitals will form a key component in the formation of research methodology. This is especially important in the identification of resilience indicators appropriate to assess resilience capacity in Cornish fishing communities by identifying key individuals and organisational elements that drive both community change and stasis. Brown ([2016, p.79](#)) suggests that social resilience relates to its collective nature through both place-related analyses and community well-being and that is strongly linked to the critical sphere of human development ([Masten, 2001](#); [Masten et al., 2009](#); [Masten & Obradovic, 2008](#); [Masten, Powell & Luthar, 2003](#)).

Social resilience is often framed within three disciplines, sociology, anthropology and geography ([Rigg, 2011](#)). In reality, there are many more. This research will draw from converging theories in other disciplines, including psychology, as important interdisciplinary areas. This may also inform longitudinal research methods and their research benefits.

Social resilience may be viewed as both an outcome linked to improved community adaptive capacity and as a process linked to dynamic temporal change associated with communities in the carving out of their own social pathways ([Chaskin, 2008](#); [Wilson, 2012a](#)). This was condensed by Wilson ([ibid.](#)) who describes social resilience in more normative tones :

“Social resilience is, therefore, about pre-emptive change which sees resilience as a desirable state, rather than simply a process to avoid disturbances. Resilience in this view is both an outcome, especially when linked to improved adaptive capacity of communities, and a process linked to dynamic changes over time associated with community learning and the willingness of communities to take responsibility and control of their development pathways.”

([Wilson, 2012b, p.3](#))

Strong capacity for agency could move an outcome from a resilience ‘coping’ initiative to a resilience building adaptive response. Thus, disturbance “... has the potential to create opportunity for doing novel things, for innovation and new development” ([Folke, 2006, p.253](#)), through adaptation and transformation. The concept of critical thresholds is associated with the aforementioned ‘tipping points’ and the (complex) difficulties of relating causality within social systems ([Christensen & Krogman, 2012](#)).

Davidson observes that there is a presumption of a direct and positive relationship between multi-scalar complexity and resilience and a need for further empirical work on notions of societal collapse to identify critical thresholds and triggering mechanisms ([Davidson, 2010](#)).

Critically, ‘fast onset’ resilience event research dominates the literature. ‘Slow-onset’ resilience takes place over months, years and decades and is often much less visible in observable and interlinked changes ([Wilson, 2012a](#)). Examples of ‘slow-onset’ resilience include poverty, slum formation, water resource depletion and sea-level rise. These are described in immediate fast-onset ‘stress’ terms, or through ‘slow-onset’ and ‘creeping’ multi-scalar impact. Conversely ‘rapid-onset’, or ‘shock’ impact on resilience might derive from earthquake, tsunami or conflict events

([Sharma, 2011, p.9](#)). Societal responses differ widely from different temporal scales, and institutional practice and populace drivers typically drive these types of events.

Such an example of 'slow-onset' change is that of globalisation as communities become slowly embedded in the global capitalist system, often moving from self-sufficiency (strong resilience) to having interconnected dependencies on capitalist markets ([Wilson, 2012a](#)). Perceptions of change can thus range from the highly visible to opaque, or anywhere in between.

The 2011 nuclear power plant disaster in Fukushima on the Japanese island of Honshu constitutes a good example of a 'rapid-onset', vulnerability-building event. Communities and their livelihoods were destroyed within hours, and a forced migration ensued, what might be construed as perhaps a total loss of all community resilience at the regional scale ([Oda, 2011](#)). The impact of this tsunami had a disproportionate effect on poor fishing communities due to their proximity to the shoreline. It was estimated that up to 25% of fatalities related to these fishing communities ([ibid.](#)). Thus, social communities can come under severe stress and are dependent on biophysical, social and economic factors. The extent to which a community can bond, bridge and link its social capital can directly impact its vulnerability and resilience ([Verner, 2010, p.268](#)). The vulnerability of 'social assets', including social networks and intergenerational learning capacity across both 'fast' and 'slow' onset change, is crucial and integral to resilient processes ([Miller et al., 2010](#); [Olsson & Folke, 2001](#); [Pahl-Wostl, 2007](#)). 'Slow-onset' change is also critical and is a deficiency in research literature which urgently requires addressing ([Wilson, 2012a](#)). However, a major issue with 'slow-onset' change is that longitudinal studies are required drawing on proxy information as a minimum. Output is significantly lacking in social research for these types of long-term studies.

Adger ([1999a](#); [2000](#)) frames social resilience within different social groups and institutional understandings, reflecting the need to contextually relate these to social resilience. Adger also reinforces the need to define social resilience at the community level rather than at the level of the individual in respect of its institutional relationships ([ibid.](#)). This further suggests and supports the notion that community level research is appropriate for social resilience research in this study ([Wilson, 2012a](#)).

Adger ([1999a](#); [2000](#)) also observes the difficulties in creating ecological resilience analogues to social resilience within social systems and the reframing of social systems into the wider environment. He draws out two distinct issues. Firstly through identifying the interdependency between social systems and the physical environment (e.g. natural harbours and fishing communities). Secondly, that human agency is framed in institutional resilience in the form of social capital and may be pervasive, persistent and resilient, driven by many factors including institutional inclusivity e.g. trust norms and social networks. The usage of natural resources (in an institutional and cultural context) is not simply a product of their economic relationships ([Adger, 2011b](#)).

Pierre Bourdieu viewed social capital as the sum expression of an interlinked network of relationships and groups :

“Social capital is the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition, or in other words, to membership in a group.”

([In : Richardson, 1988, p.442](#))

Social capital at the community level is about people, their relationships and the benefitting of the community (or not) from these interactions. Social resilience is concerned with the interpersonal activities of people and groups within a community seeking to undertake social change ([Brown, 2014](#); [Brown, 2016](#)). If social capital is perceived as a building force for community social resilience, then it is a wise investment of effort to understand social learning within this approach ([Gooch & Rigano, 2010](#)). Studies focussed on individual spatial behaviour in relation to community resilience have suggested that a resilience lens provides promise in describing how communities may or may not respond in the face of change ([Maguire, 2008](#)). Gooch and Rigano ([ibid.](#)) further suggest that community-scale social resilience is coupled to the resources to which a community has access and can practically use to deal with linked socio-ecological changes. Magis ([2010](#)) is supportive of this notion in community resilience terms :

“Community resilience is the existence, development and engagement of community resources by community members to thrive in an environment characterised by change, uncertainty, unpredictability and surprise.”

([Magis, 2010, p.1](#))

Individual resilience, or the ability to ‘bounce back’ or reintegrate after difficult life experiences, constitutes the lowest granularity level of the conceptual resilience scale (see Fig. 2-3). It is argued that this can be a socially learned phenomenon developed and sustained through discourse and interaction through multiple communicative processes outlined in psychological studies ([Agathon & Agathon; Bandura, 2006](#)). These processes encourage a normalised view of resilient activity, embedding identity ‘anchors’, the use of communication ‘networks’, and downplaying

negative emotions in favour of positive ones ([Buzzanell, 2010](#)). These 'individual' traits can equally be applied at the community resilience scale. Social learning 'migrates' and permeates across communities and individuals through customs and behaviour and there can often be no clear differentiation of community and individual. The thesis that globalization threatens community resilience will be explored based primarily on loss of social learning capability and consequent loss of social memory. Social memory and institutional memory in some views stand in isolation; in other ways, they form a continuum. This concept will feature in relating community belief norms to institutional norms in this research at the community level to build collective resilience.

Norris ([2008](#)) captures some of the factors underpinning the building of community resilience such as planning, and importantly, trust :

"To build collective resilience, communities must reduce risk and resource inequities, engage local people in mitigation, create organizational linkages, boost and protect social supports, and *plan for not having a plan*, which requires flexibility, decision-making skills, and trusted sources of information that function in the face of unknowns."

([Norris et al., 2008, p.1](#)).

This is certainly not a new concept, humans have learnt to adapt over millennia as social creatures creating collective resilience (and vulnerability) and the characteristics that encompass living in a community.

Social resilience as 'capital' can also be defined as the social connectedness of a community ([Gooch & Rigano, 2010](#)). The essential constituents of social capital are social values (norms), networks and trust. These are learnt over many years and generations, serving as a cultural normality for future generations ([Putnam, 1993](#)).

These skills and cultural traditions are socially learnt both *with* and *from* others underpinning the social learning experience ([Cocks, 2003](#)). Social learning begins with an understanding of the social context of attitudes, language, values, norms, 'socially acceptable' behaviour and acquisition of knowledge. Another important factor is that learning takes place in networks or 'communities of practice' influenced by the governance configuration in which they are embedded ([Bandura, 1976](#); [Pahl-Wostl, 2008](#)). Adaptive management strategies rely on social learning to build up social capital and other adaptive capacities within a community. Social memory is an important factor in the maintenance of resources in cultural and normative activity in observing resilience at the community or individual level performing a vital function in normative resilience ([Cinner et al., 2011](#)). Shared values and adaptive capacity feature strongly in social resilience coupled to the critical nature of social networks ([ONS, 2011b, p.1](#)).

From an anthropological perspective, as previously discussed, these social values are learnt in collaboration with others over decades and generations ([Putnam, 1993](#)). Thus, values that society deems important can be framed within social learning in both a family and community orientated social context. It can also be concluded that an individual or community willingness to adapt to social change may constitute a significant driver in social resilience building. Consequently, a loss of these resilience attributes in a community may infer vulnerability.

The general concept of resilience has impact across many disciplines and serves as a common theory to observe and synthesise debate in an interdisciplinary manner. Also of significance, is the pace of change in the analysis and synthesis of social resilience theory in the context of exposure to significant adversity. Resilience may also reflect the capacity of individuals to navigate their way to the psychological,

social, cultural, and physical resources that sustain their well-being. It may also inform their capacity individually and collectively to negotiate for these resources ([Ungar, 2008](#); [Ungar, 2011](#); [Ungar et al., 2006](#)). Resilience may also be enhanced by linked key factors, including adaptive capacity, economic development, information and communication, community competence and social capital ([Gooch & Rigano, 2010](#); [Norris et al., 2008](#)).

Research has expressed the importance of social resilience in the resilience debate and the existence of knowledge gaps ([Maclean, Cuthill & Ross, 2014](#)). Six thematic areas were identified, firstly that of knowledge, skills and learning, secondly that of community networks, thirdly the importance of people-place connections, fourthly community infrastructure, fifthly a diverse and innovative economy, and lastly, engaged governance.

As discussed in Section 2.1, analytical resilience methods include status (through capitals), as well as adaptation and transformation approaches ([Béné, Frankenberger & Nelson, 2015](#); [Cutter, 2000](#); [Cutter et al., 2008](#)).

Both vulnerability and resilience are dynamic processes. Process-related resilience is defined in the resilience literature as being embedded in continual learning (social learning) contributing to better judgement, capacity building and decision-making in community life ([Cutter et al., 2008](#)). Resilience and vulnerability are treated as discrete and *oppositional entities* in this research.

The concept of panarchy described in Section 2.2, uses processes and cycles to describe the linkages between natural and human systems as nested sets of hierarchical, multi-scalar linked processes ([Allen et al., 2014](#); [Berkes & Ross, 2016](#); [Gunderson & Holling, 2002](#); [Holling, 2002](#)). Panarchy is denoted as being ambitious as a framework but nonetheless provides an important approach for describing

interrelationships between structure, process and scale in social systems ([Cutter et al., 2008](#)). Panarchy also acknowledges the speed of change in systems and their differential influence on each other through 'slow' and 'fast' variables. However, most research using both resilience and panarchy, while acknowledging scale and cross-scale linkages, seldom ventures away from a descriptive context, especially within the social context of resilience ([Allen et al., 2014](#)). This view is further supported by Pelling and Manuel-Navarrete ([2011](#)) who state that there is still a lack of theory within process based heuristic approaches to resilience such as panarchy, and there only a few empirical cases to draw on. Pelling and Manuel-Navarrete ([ibid.](#)) also express the possibility of using the adaptive cycle as an analytical frame to track social systems and change. However, they assert that the notion of community power configurations is a key factor in transformation to a different 'state' and is conspicuously missing in the study of resilience system dynamics. The social connective processes are expressed within communities by community connections 'reaching in', 'up', 'through', and 'out' of the community through social networks involving, stakeholders, institutions and political actors ([Berkes & Ross, 2016](#)). Thus, there is a need to understand social dynamics at different scales and panarchy is valuable as a theoretical approach to describe social system dynamics.

However, for measurement purposes, resilience and vulnerability are often viewed as static entities or phenomena and the measurement of resilience continues to challenge researchers in terms of factor or driver metrics for social resilience ([Cutter et al., 2008](#)). Of real interest in this debate is to what extent these factors can be adopted for general use and where community uniqueness confounds such efforts. The adoption of status using capitals (see Section 2.3) to analyse resilience adopts a 'snapshot' view of the states of capitals at a narrow point in time.

Much work on longitudinal resilience studies has been undertaken in the field of psychiatry, which informs the development of social resilience research. Longitudinal analysis using consistent metrics has been employed to disentangle the events that shape behaviour and change across multiple waves of status based analyses ([Cosco et al., 2016](#)). The issue of adopting consistent metrics and resilience thresholds is problematic and may not be useful in many social community analyses. This confounds longitudinal analyses to some extent when collecting data through repeatable waves of analysis. Further to this, the use of different researchers over time also presents consistency issues through varying interpretations and positionalities. This is also important in the absence of established benchmarks and thresholds in social community research. Indeed, the use of metrics in social resilience research to a 'useful' scalar and temporal level is a challenge that may not be met by 'conventional' longitudinal studies.

A novel hybrid technique for longitudinal social resilience research is potentially that of using single or multiple waves of status-based analysis in combination with proxy and secondary data to express community resilience. This notion is examined in more detail as a contribution to provide greater insight into social resilience research.

Resilience status approaches and assessment of slow-onset change processes are problematic as they do not provide a full picture of the processes at work over time as status views are intrinsically 'snapshot' analyses ([Béné, Frankenberger & Nelson, 2015](#); [Cutter, 2000](#); [Cutter et al., 2008](#)). The use of three month duration community studies (see Chapter 3) can be viewed as snapshot or status based analyses presenting difficulties in evaluating longitudinal process change.

Social learning (situated in the context of resilience earlier in this section) is now further considered in its own right (in the community context).

2.4 Social learning

Social learning is deeply involved in resilience theory formation and is defined as 'a change in understanding and learning that goes beyond the individual to become situated within wider social units or communities of practice through social interactions between actors within social networks' ([Reed, 2010, p.6](#)). The notion of social resilience is focussed around social learning pathways, agency and social dynamics, such as anticipatory factors. This distinguishes social systems from natural science orientated ecosystems as previously discussed. Emphasis is drawn to the risks of reductionism in complex human systems to simple unlinked and independent processes ([Ungar, 2015](#)). Social learning is a contested theoretical approach, its evolution tending towards a normative basis ([Reed, 2010](#); [Wilson, 2015a](#)).

Social learning theory is widely considered as a process leading firstly to a change in understanding of individuals and groups, secondly that this change is situated within wider social units of people such as geographically bounded communities, and thirdly, that learning happens through social interactions and processes between actors within a social network ([Reed, 2010](#)).

Research also suggests that social groups can participate in 'collective learning' or the 'wisdom of the crowds', building and accumulating a shared perspective of the world ([Sol, Beers & Wals, 2013](#); [Surowiecki & Silverman, 2007](#); [Wals, 2007](#)). This is a critical factor in research at the community level through the

impact of collective learning linked closely to that of intergenerational learning ([Weeratunge et al., 2014](#)).

The fabric of a community ([Huijbens, 2012](#)) is woven on a continuous basis, driven by multiple resilience and vulnerability drivers, or factors involved with social learning, such as networks of residents and, critically, their engaged interactions ([Bandura, 1976](#); [Gale, 1996](#); [Reed, 2010](#); [Van Assche et al., 2013](#)). Analogies with systems thinking are therefore problematic and caution needs to be taken in the use of systems based and mechanistic analogies.

Social life moves across a broad and dynamic spectrum of personal, random, informal and formal encounters in a village. Social networks are 'vehicles' that can influence people's knowledge, opinions and views in a community's social space by utilizing, creating, enhancing, and degrading engagement within these social spaces ([Granovetter, 1985](#); [Granovetter, 1973](#); [Hunter, Vizelberg & Berenson, 1991](#); [Stevenson & Greenberg, 2000](#)). Influence and information exchange can occur on a one-to-one basis through social interaction, and importantly, influence through networks is seeded from within the larger network 'system' in which the community actors are embedded ([Coleman, 1990](#)).

Local networks of friendship can effectively strengthen extant bonding between individuals and groups while novel relationships between individuals and groups constitutes bridging ([McIntosh, 2008, p.17](#)). An imbalance of bonding can foster insularity, lock-in, intolerance of change and an aversion to incomers while a bias towards bonding can encourage resilience in low trust communities lacking in social cohesiveness, and affected by suspicion, fear and insularity ([Putnam, 2002](#)).

A further element of social learning is that of learning through the process of social interaction itself. Social networks have traditionally been conceptualized as the

link between the micro-niche (individual) and the macro landscape (institutions and cultural norms) ([Geels, 2011](#)). Social research has supported the theory that 'communicative action' learning now takes place in wider notion of society and organisation which now might be logically extended to the internet and technology based abilities, such as video-conferencing and Twitter™ evident from such significant events as the 'Arab Spring' of 2011 ([Habermas, 1985](#)).

Social networks can be fluid and expansive. People may be members of many communities, networks associated with these communities, personal networks and numerous bridging and bonding relationships in other, often ephemeral, networks. Bonding can be viewed as both a resilience factor, and as vulnerability, depending on observer positionality. Bonding can lead to socio-psychological 'lock-in' and a condition of stasis and intransigence which, in some cases, can be a vulnerability at the community level ([Patulny, 2007](#)). Research suggests that it is a 'harmonious mix' of bonding and bridging factors ([ibid.](#)) within communities that are beneficial to the community in general.

Bonding and bridging can be considered through influence within a community, as being either resilience or vulnerability factors. This is important in terms of social resilience, especially in consideration of how social capital is mobilised through bonding, bridging and linking ([Wilson, 2013](#)). This 'bonding-bridging-linking' 'triplet' ([Putnam, 2002](#)) gives social capital, through individual agency, a longitudinal dynamic and contextual quality that facilitates the use of exogenous and endogenous indicators of adaptive capacity ([Pelling & High, 2005](#)). Conference output from the Resilience 2014 in Montpellier conference ([Plodinec, 2014](#)) suggests that social capital (both bridging and bonding) is probably the most important single determinant of resilience at the community level but only in the

context of each of the community's systems. Pelling and High mark a clear distinction between social capital as informal networked relationships built on norms, reciprocity and more formal organizational relationships ([Pelling & High, 2005](#)). This is important as it demarks two levels of formal and informal relationships as analytically distinct to observe the processes that promote or constrain adaptive capacity as a powerful resilience factor ([ibid.](#)) .

The ability of a community to develop coping strategies and to adapt, anticipate and change in the utility of social memory and social networks is intrinsic to this research. The ongoing development and dynamics of social networks are a key aspect of social resilience and linkages with social memory and learning form a strong aspect of community cohesion as the 'glue' that binds communities together. ([Norris et al., 2008](#)). It is perhaps important to emphasise at this juncture the importance of social cohesion in social resilience and community dynamics, social cohesion can be viewed as the 'structural DNA' of a community ([Forrest & Kearns, 2001](#)). This represents the complexity, diversity and change and the interrelationships between interests, normativity and identity manifested in everyday lives that bond communities together influencing the resilience and vulnerability of communities ([Barrett, 2015](#)). Communities change and 'morph' in time and space and it is the energy and enthusiasm of these networks that is a critical factor in developing reciprocity, trust and cohesion amongst community members ([Walker et al., 2010](#)). Robert Putnam coalesces many of these ideas :

"A society that relies on generalised reciprocity is more efficient than a distrustful society, for the same reason that money is more efficient than barter. Trust lubricates social life."

([Putnam, 1993, p.71](#))

This is important because this research aims to cast light on the importance of these social networks as agents of social resilience or vulnerability. It is these networks that make up the very story of human civilisation and of contemporary social transformation ([Oommen, 1995](#)). To restate, one person's resilience is another person's vulnerability and this has strong links to notions of interest, power and agency ([Robards & Greenberg, 2007](#)). Social networks may be identifiable through typologies to observe social capital characteristics. Typologies are defined as organized systems of types that can make crucial contributions to diverse analytic tasks, forming and refining concepts, drawing out underlying dimensions, creating categories for classification and measurement, and sorting cases ([Collier, LaPorte & Seawright, 2012](#)). Typological approaches may involve identifying types of social networks characterised by types of membership e.g. family and friends (see Appendix C). Notions of heterogeneity and homogeneity in typological approaches are built upon in later chapters.

Identity, embedded in social memory in rural areas ([Alkon & Traugot, 2008](#); [Hynek & Teti, 2010](#)), is a factor in social resilience and one from which communities derive psycho-social and material benefits in terms of 'ways of living' relating to others ([Bell, 1992](#)). Further to this, embedded identity is considered a direct factor in the building of social and community resilience ([Magis, 2010](#)) and social networks are composed of interconnected people, groups, place, linkages and interactions in the context of this research ([Granovetter, 1973](#)).

Research suggests that the 'composition' or 'topology' of social networks is important and can influence actors behaviour, especially in governance terms ([Bodin & Crona, 2008](#)) and encourage pathways to heterogeneously composed communities ([Cattell, 2001](#)). It can also be argued that 'social topologies' are created

and driven by community actor behaviour informed by a high income fluxes combined with 'dead' community spaces such as second homes ([Gallent, 2007](#); [Paris, 2008](#)). Whilst social hubs and networks are analysed predominantly from their physical form, it is also pertinent to consider 'communities of the mind' ([Ross, 2015](#)) linking the physically observable to notions of social memory. Research also suggests that residents of fishing communities may not hold a singular sense of being a member of a 'fishing community', and may also depend on the positionality, or affiliation to certain individual or multiple communities within a 'fishing community' ([Brookfield, 2005](#); [Ross, 2013](#); [Ross, 2015](#)).

Cornish fishing communities have forged their own longitudinal identity through culture, taboos and traditions over millennia, as discussed in Chapters 4 and 5 ([Berkes, Colding & Folke, 2000](#); [Nuttall et al., 2005](#)). The adaptation and development of coping strategies based on social learning experiences influences social memory retention through its 'stickiness' over time in the community consciousness ([Jovchelovitch, 2012, p.440](#)).

The concept of social learning and memory is a key element in understanding and placing transition pathways and resilient attributes into context. Wilson ([2012b](#)) argues that it is the quality of community level learning that promotes an understanding of adaptive capacity and is thus a key factor in community resilience. Importantly to this research, many studies have shown that it is extremely advantageous to social learning when the entire community is involved in activity to manage disturbance. Wilson ([ibid.](#)) also proposes that the intergenerational transfer of learning is critical for hazard and risk anticipation and that a sense of place and upkeep of traditions are key drivers. Wilson ([ibid.](#)) also notes that looking at 'lost' social memory is not a unique feature of modern communities and that some

communities exposed to, e.g. volcanic hazards, might benefit in revisiting the cultural knowledge still, or historically accessible, within local communities. This cultural knowledge may have been lost or displaced over time.

Resilience can be viewed through the context of social learning through either intermediate⁶ outcomes or processes, or indeed both. Human agency introduces anticipation in individual and community terms ([Béné et al., 2012](#); [Berkes & Ross, 2016](#)) and the passing down of memory from generation to generation and from actor to actor constitutes 'learning pathways' ([Bandura, 1976](#); [Reed, 2010](#)). Implicitly and contextually, this may lead to or involve a 'path dependency' wherein a community may be 'capitally imbalanced' and conceptually channelled into a narrow 'corridor' of options and pathways ([Wilson, 2012a](#)).

Social memory encompassing human agency is 'normal magic' ([Masten, 2001](#)) and communities have evolved strategies to both harness and enhance the cumulative knowledge of their interaction with the environment through positive and negative elements of environmental management practices. Specific catastrophic phenomena such as tsunamis may have a deep cultural, community, and religious memory in Japan and other countries impacted historically by 'Pacific Rim' tectonic movements ([Berkes & Seixas, 2005](#); [Wilson, 2012a](#)). Japan, amongst other countries, has developed strategies that often involve 'encoding' positive aspects of social memory into religious aspects such as Buddhism and taboos. An example of this is not building infrastructure and homes in historical tsunami 'strike zones'. Strong aspects of sustainable environmental transition and community resilience is also similarly encoded and linked in the Kingdom of Bhutan through the respect accorded to nature within Buddhism ([Wilson, 2012a](#)).

⁶ i.e. not 'hard' or 'end point' outcomes, discussed further in Chapter 3.

Negative aspects of social memory, or vulnerabilities, include those of 'entrenched' or 'locked-in' social norms which may themselves be constraints to change, also known as 'system memory' ([Wilson, 2012a](#)). This can be likened to a 'homeostatic' situation where stasis is the norm. Powerful elites that control social memory in a negative way as a result of power imbalance can influence social capital e.g. Easter Island forest destruction ([Wilson, 2012a](#)). This activity was the result of religious cult-driven social memory leading to the catastrophic environmental denudation of the forests.

The concept of 'pathway ruptures' suggests that a community can change rapidly from a position of relative resilience to a more exposed or vulnerable position from any part of a conceptual resilience-vulnerability spectrum ([Wilson, 2012a](#)). Abrupt or 'fast-onset' change tends to be the most observed and articulated in research terms primarily due to availability and immediacy of data. As discussed, the more problematic perspective is that of 'slow-onset' change, where change is less easy to observe and denotes a difficulty in inferring causality. There are few longitudinal community studies of long term slow-onset change or 'regime disruption', making the study of drivers of change problematic ([Boon, Cottrell & King, 2015, p.85](#)). Long-term change is subject to many confounding and complex factors and may follow an increasingly complex and non-linear transitional pathway over time. Resilience ruptures can also occur over time, both short and long term, both for normatively framed 'benign' resilience and 'undesirable' vulnerability ([Wilson, 2012a](#)).

Resilience can be considered through the metaphor of a continuum vis-à-vis a dichotomy ([Berkes & Ross, 2013](#)). In this research, resilience is viewed as a

trichotomy i.e. an observed resilience factor e.g. poverty as a factor is resilient, partially resilient or vulnerable⁷ ([Shaw, Scully & Hart, 2014](#); [Wilson, 2014](#)).

Social belonging and identity based on the past builds community identity and is a progressive and cumulative process ([Wilson, 2015a](#)), and as suggested earlier in this chapter, may be driven with deliberation, or through 'happenstance'. Importantly, and to re-iterate, social memory will influence the perspectives and positionality of community members through different spheres of influence and power. Social memory, as a resilience factor may be both expressed and reinforced in what, and for whom, this factor applies in a particular community context ([Brown, 2014](#)), and which may, or may not, be expressed across similar communities. Social memory, in its association with resilience theory, is subject to contested views of normative and analytical perspectives ([Brown, 2014](#)). Social memory, as used in this research, is a context in thinking about social processes and drivers within resilience theory ([Brown, 2014](#); [Wilson, 2012a](#)).

In an Icelandic study of second homes in communities and their influence on social learning ([Huijbens, 2012](#)), it was suggested that participation, involvement and immersion in local history and the creation of an identity within the community can help to create tighter community bonds ([Putnam, 2000](#)). This may fulfil a need for place attachment ([Huijbens, ibid](#)). This Icelandic research suggests these engagements between people are a fundamental aspect of social capital in the context of the social fabric of a community :

⁷ This trichotomy is adopted in the novel Community Resilience and Vulnerability Index (CRVI) introduced in Section 2.6 and developed in Chapter 8.

“Social capital is embedded in the relationships between individuals, who also take part in various social networks in their daily life. It is more fruitful to look at social capital as a product of ongoing or active mutual engagements of people.”

([Huijbens, 2012, p.337](#))

The informal institutional concept of ‘Dugnad’, in the Norwegian vernacular, conveys a sense of voluntary engagement, communalism and contribution to the social networks and wellbeing of a village through active participation in music, art, fishing, sports and outdoor recreation, and other social activities ([Amundsen, 2012](#)).

This phenomenon is about more than just ‘doing the job’, or ‘ticking the box’. It is about being engaged with people, bonding, and being part of the ‘social fabric’ of a community, and forms observable social resilience in these Nordic communities. ‘Dugnad’ appears to be in decline due to demographic transitions with prosperous neighbours moving into the community linked to the growth of second homes compounded by decline in fishing activities in the North of Iceland ([Huijbens, 2012](#)). It is suggested that there are two distinct ‘types’ of second home owner in these communities, those who wish to maintain ties with their kin and neighbours and those driven by leisure motivations. Conflict has arisen between these two ‘types’, firstly through worries about degradation of community values and, secondly, through concerns that these communities are becoming more seasonal with an associated loss of community culture across the year. This conflict between traditional culture and capitalist influence is very important in community dynamics, exemplifying a Bourdieusian notion of social capital at the community level ([Bourdieu, 1984](#)).

Adaptive capacity at the community level may be vulnerable to constraint through exogenous influence by both government and commercial interests ([Shaw, Scully & Hart, 2014](#)). Exogenous, stratified, 'over-structured' and hierarchical mind sets may co-exist in tension with traditional notions of social community networks in the Nordic communities discussed earlier ([Huijbens, 2012](#)). The consideration of collaborative and altruistic aspects of social networks is an important element in this discussion as is examination of the balance of traditional and modern community social practices.

The academic literature suggests that social memory, social networks and social cohesion are strongly linked, and that social networks are considered to be of principal importance in the social cohesion of communities, providing the 'glue' that helps to keep people mutually engaged in their community in a normative sense ([Putnam, 1993](#); [Putnam, 2000](#); [Wilson, 2012a](#)). The strength of a community network can disclose active community participation ([Putnam, 2002](#); [Putnam, 2000](#)), mutual obligations, shared values, reciprocity and interaction ([Pelling & High, 2005](#)) which are all seen as factors in social resilience ([Wilson, 2012a](#)). Visceral responses to disasters, and dealing with loss of life are examples of shared values and social cohesion bringing a community together in a time of shared grief. An example of this was the post 2010 earthquake events in Christchurch, New Zealand ([Wilson, 2015a](#)) where the community collaborated and worked reciprocally to recover their lives. Further, planners were accused of neglectfully ignoring the criticality of community social memory prior to the 2005 Hurricane Katrina events in Louisiana further endangering life ([Colten & Sumpter, 2009](#); [Colten, Hay & Giancarlo, 2012](#)). The importance of social capital and social fabric ([Huijbens, 2012](#)) is articulated through the shared social values of trust and reciprocity expressed by Sander ([2003](#)) :

“Social capital focuses on the social networks that exist between people ‘like us’ (literally who knows whom) and the character of those networks, the strength of the ties, and the extent to which those networks foster trust and reciprocity. The core concept of social capital is that social networks matter, both for those in the networks as well as sometimes for bystanders as well. At the core of social capital is trust, some community’s exhibit thick trust where trust extends only to known friends and associates, while other communities exhibit thin trust where the trust extends as well to total strangers. With these generalised norms of trust, people engage in reciprocity, doing for others not with any immediate expectation of repayment. This kind of thin trust is especially valuable, since it lubricates social interactions.”

([Sander, 2003, p.3](#))

Some research suggests that this ‘loose’ or ‘thin’ trust between members of communities may be analogous to ‘bridging’ theory ([Putnam, 2000](#)) between people in social networks. This may lead to the building of closer relationships and ‘thick’ trust ([Olsson, Folke & Berkes, 2004](#)), analogous to ‘bonding’ theory ([Putnam, 2000](#)). However, as is the case with bonding and bridging, reciprocity and trust cannot be simply understood as ‘spectral poles’ in a continuum from bridging and bonding, or thick to thin. Reciprocity is social capital embedded in non-linear personal relationships through social memory and actual and temporal co-presence ([Torche & Valenzuela, 2011](#)). Trust can be seen as social capital embedded within relationships with strangers through relative impersonality or anonymity. Critically, these two types of social capital are not seen as mutually interchangeable (or fungible). Reciprocity and trust are dynamics which are strongly observable in times of crisis ([Patulny, 2007](#)) and (likely) a substantial element of strong social learning and social networks ([Pelling & Manuel-Navarrete, 2011](#); [Putnam, 2000](#)). Trust reinforces norms of generalised reciprocity, reciprocity invokes a sense of interpersonal trust ([Pelling & High, 2005](#)). Further, that there are balanced and general reciprocities, balanced through the routine exchange of trust and e.g. gifts.

2.5 Notions of community and the object of resilience

There are widely different academic conceptualisations of 'community'. In this chapter, the focus of this research is clearly focussed on both the social and community context. However, there remain many possibilities and pitfalls around the potential multiple meanings of 'community' (as the object of resilience) requiring clarification. These range from more functional questions about how one defines the character of a community (e.g. fishing, tourism, coastal) and the influence of interpretations made by the researcher on the lenses, metrics and judgements used in any resilience assessment, to interesting questions emerging from later empirical data about the materialities and imaginaries of community identity, and their relationship in the construction of community resilience and resilience assessment.

This section further examines the functional and imaginary aspects indicated above while the emergent and further interesting questions of the imaginary and materiality are discussed in the analysis chapters, Chapters 6, 7 and 8, and more specifically encompassed in Section 9.4 that examines a trajectory towards more cultural notions of extant and future work.

Notions of community can span contexts at micro to global scales of degrees of bio-physical interaction ([ibid.](#)), from classes of schoolchildren to communities of microbes and notions of deep ecology as a community of teleconnections ([Naess, 1988](#); [Roszak, 2003](#)). It is not intended to delve deeply here into the multitude of conceptualisations of community but to steer the discourse towards its specific use in this study being cognisant of the complexities of the debate and the pitfalls of not framing 'community' utility adequately.

Research suggests that the reality of many communities is also a matter of positionality and that 'multiple realities' (different perceived views) exist through the

'lenses' of groups and individuals ([Schuetz, 1945](#)). Different conceptualisations of community also inform key issues in the perception of resilience thought i.e. " ... the resilience of what and for whom" ([Brown, 2014, p.109](#)) conveys the notion that different members of communities can experience resilience and vulnerability in entirely different ways.

Communities may not be spatially fixed and correspond to a particular kind of social arrangement or typology and the fluid nature of community may be an expression of belonging. Community events may be expressed as a particular mode of public imagining and being and experiencing social belonging as a communicative 'public happening' ([Delanty, 2003, p.26](#)). From an anthropological and sociological perspective, communities are dynamic, social and cultural entities. Further, it is important to articulate that the term community is a 'socially built' notion and its members may have wildly different feelings on what 'community' means to them.

The search for 'community' may be a powerful driver to those aspiring to escape the trappings of urban life and modernity, drawing new residents to coastal 'honeypot' communities. Some new residents may be seeking their 'tribe' while others may not :

"The idea of community, which perhaps explains its enduring appeal, is related to the search for belonging in the insecurity of modernity."

([Delanty, 2003, p.1](#))

The 'homogenisation' of norms observed normatively across communities is likely not representative at the individual level. Some academics argue that the community 'lens' can be viewed in a context that is viewed 'upward' to institutions

and 'downward' to social roles ([Gertler, Wolfe & Shaw, 2002](#)). This is not considered as helpful in observing social communities objectively in this study.

Four types of communities have been theorized by Chaskin ([2008](#)). The first is that of an effective unit of belonging and identity by relationships, shared norms and kinship. Secondly is community as a functional unit of production and exchange ([Warren, 1978](#)) based on a community's instrumental values. Thirdly, a community can be viewed as a network of relations and informal mechanisms of social control and support ([Sherrieb, Norris & Galea, 2010](#)). Fourthly, a community can be viewed as a unit of collective action. This means that, in addition to being a social unit, a community can also be viewed as a political unit. All four of these notional typologies of community are considered in this study (which roughly links to economic capital for the first two types). Social capital is more closely linked to the remaining two 'types' with the further inclusion of political capital. The notion of community spans multiple scales and contexts and interlinkages across scales ([Delanty, 2003](#)).

Thus, the broad concept of community definition is a highly contested area ([Brookfield, 2005](#); [Clay, 2007](#); [Delanty, 2003](#); [Ross, 2013](#); [UKGOV, 2012](#)). Practices of long heritage, tradition, culture, socio-economic change and resilience building informs the contemporary situation in regard to the difficulties of economic survival and social resilience in many communities ([Jamieson, 2009](#); [Marshall, 2007b](#); [Marshall, 2007a](#); [Pelling, 2003](#)).

Recapping from Chapter 1, this research views the object of resilience (a community) as the totality of social system interactions within a defined geographic space, in this case at the village/town level. This geographic 'space' forms and is maintained as the basic object of resilience. However, in assessing different scale

impact and processes, and especially relevant to power configurations other objects of resilience at different scales are also considered e.g. the EU.

It is recognised that there are many different communities within such geographically defined spaces and sub-populations may indeed have different levels of vulnerability. Thus, this research is (initially) focussed on place and the interactions initially between the social natural, political and economic domains (and later using the resilience framed CRVI) within a geographically constrained area ([Cutter, 2008, Wilson 2012b](#)). The use of metrics in this research is that of a 'supporting' role to the predominantly qualitative approach in this research (e.g. numbers of social networks and hubs). The important notion of positionality inevitably has an impact on judgements in qualitative research and indeed the building of arguments in quantitative research ([Denscombe, 1998](#)), this is discussed in further detail in the positionality section (Section 3.6) and reflected upon across the research in general.

The concept of community is a much contested term through lenses of 'open', 'unbounded' notions of community systems to easily identifiable 'geographically bounded' communities, such as a village ([Wilson, 2012b](#)). The focus of this research at the community level at the geographically bounded village scale where the implementation of resilient pathways will have its most direct effect on the local community levels 'on the ground' as a result of many scales of policy and intervention ([ibid.](#)). The object of resilience at the geographically constrained community level, presents one of the paradoxes, or 'wicked' problems, at the heart of this study, the notion that fishing heritage communities may hold 'community' as a cherished tradition, while this same cherished tradition may transition into an existential threat to itself as it is simultaneously positioned as a commodity. Such 'wicked' issues

are multi-faceted, with divergent framing of the problems coupled to the interests of diverse groups and individuals with differing values and perspectives ([Ross & Berkes, 2014](#)).

As discussed, the basic notion of community as the object of resilience adopted in this research is focussed on those of social community, community business, fishing, tourism, maritime and coastal characteristics at the geographical village community level. These form the functional attributes and are examined through the research threads and subsequent methodological considerations in this study. These functional attributes serve to frame the approach adopted in the research. However, the question of how the 'character' of a community as a social conceptualisation is described is best assessed through a grounded research approach. Assessments of the 'rich description' of a communities character both requires, and deserves recognition from those people who can express grounded views contextually.

A convergent approach using mixed-methods (also see Chapter 3) is adopted to promote an understanding of community resilience through this geographically defined scale (or level) of analysis to inform this research ([Magis, 2010](#); [Sherrieb, Norris & Galea, 2010](#)) and its broad research questions, e.g. how can vulnerable fishing communities build resilience ?

2.6 The Community Resilience and Vulnerability Index (CRVI)

In brief, an indicator based typological approach is used in this study as a 'snapshot' or 'status' based method in assessing resilience 'operationally'. This approach will further describe emergent resilience factors from the fieldwork and contrasts them across the three case study communities using these resilience factors, or indicators. This novel approach is the Community Resilience and

Vulnerability Index, or CRVI, in the context of this research. The index assesses resilience factors on a three-point scale (trichotomy) from resilient, partially resilient and vulnerable for each community derived from a hybrid and proxy analysis approach. The CRVI is described in more detail in Section 3.4.9 of the Methodology Chapter (Chapter 3) and Chapter 8.

This CRVI assessment is both analytically and theoretically linked to the core research enquiry strands as outlined in Table 2-1 (below) and later methodological and analysis chapters. These research strands are derived from the theoretical framing of this research forming core reference points for ongoing discussion on resilience theory throughout this research :

Research enquiry strands
1. Is a community vulnerability typology a suitable vehicle to give substance to resilience ?
2. Does a status based capital design work in relation to exploring resilience through the analysis of systems that undergo change and transformation ?
3. Is resilience a useful concept for examining the under-investigated notion of slow-onset change ?

Table 2-1 : Research enquiry strands – Source : ([Author](#))

The Community Resilience and Vulnerability Index (CRVI) used in this study is a stated research output to express community status-based resilience supported by process views.

The resilient factors emergent from the field research were initially grouped for discussion into groups of a) socially connected communities, b) event memory and c) agency and power (see Chapter 7). The three emergent resilience theory framed themes (post-fieldwork) will be adopted in the CRVI in Chapter 8, namely 1) social

learning, 2) livelihoods and 3) housing and services. The first two themes are loosely aligned to 1) social capital and 2) economic capital respectively. The third theme, housing and services theme loosely spans two capitals, namely economic (see above) and political capitals.

Each resilience indicator (or factor) in the CRVI is presented as being resilient, partially resilient or vulnerable (red, amber and green respectively, see Table 8-5). These factors are represented at the community level within resilience themes e.g. the seasonality indicator is represented within the livelihoods resilience theme for Polperro as being vulnerable (also see Table 8-5). The indicator adopted approach for this categorisation is based on the perceived impact of seasonality as a broad factor in the livelihoods of Polperro in relation to that of the other two communities. Thus it is a comparative and, importantly, an inductive indicator piloted in this research as a measure of community resilience ([Béné, Frankenberger & Nelson, 2015](#); [Constas, Frankenberger & Hoddinott, 2014](#); [Cosco et al., 2016](#)).

Challenges with the use of thresholds include their interpretation as breakpoints, or thresholds through which a new social resilience 'status' is derived. Such issues are embedded in the social dimension of resilience and it is common for adaptive systems to be emphasised at the local community level rather than larger scale system processes through e.g. functional analysis ([Christensen & Krogman, 2012](#)). Social roles may provide a useful role in explaining the nuanced dynamics of culture, environment and society for SES adaptive capacity and critically, the utility of social threshold 'language' in power configurations. The (limited) use of social thresholds in this research recognises how communities interpret social change and challenges within extant social memory. This can embolden or weaken different elements of communities directly influencing adaptive capacity at the community

scale ([Christensen & Krogman, ibid](#)). This is a critical focus of the use of thresholds in this research. Thresholds identified are specific to this research but may emerge as useful at different scales and contexts, examined later in this study.

The community indicators adopted in the CRVI are variable in composition and based on intra-community comparisons to 'baseline' the assessment of an indicator. For example, in the social learning theme, observing the thresholds for 'social networks', the argument is made that it is the number of social groups that is one important factor in determining the richness of extant social networks (see Table 8-5). Thus this is a basically numerical approach in the assessment of these factors. Conversely (and for most of the other thresholds), there is a more subjective approach adopted ([Béné, Frankenberger & Nelson, 2015](#); [Constas, Frankenberger & Hoddinott, 2014](#)). For example, in the same social learning theme, the factor of 'social actors' is less about community actor numbers and more associated with the capacity for actions and activity for these actors in driving social change vis-à-vis the other communities in this research. Additionally, there are examples of multi-capacity type factors such as 'seasonality' in the 'livelihoods' theme with complex drivers and responses across many scales. The same multi-scalar presence can be observed through many other factors such as 'second homes' and 'poverty'. The retention of richness and understanding of the state of a factor is highly contextual in regards to many factors such as observed scale, culture and political aspects as drivers at wider scales ([Béné, Frankenberger & Nelson, 2015](#)). Thus, an important feature of the CRVI is that it is essentially a community-centric index, and the three intrinsic resilience themes of social learning, livelihoods and housing/services, as a combination, are very specific to community level research. This is important in considering how the CRVI might be integrated into wider, multi-scalar resilience

frameworks e.g. the FAO resilience framework ([Béné, Frankenberger & Nelson, 2015](#); [Constas, Frankenberger & Hoddinott, 2014](#)).

An important resilience assessment topic is the problematic issue of intervention priorities. These are driven through policy and underpinned by measurements and is a key driver in creating resilience measurement frameworks ([Béné et al., 2016](#); [Béné, Frankenberger & Nelson, 2015](#)). Thus, there is a drive to provide quantitative measures of resilience driven by policymakers and governance.

The value of a rich and locally contextual approach (as in the CRVI) is thus important. This is especially true in where resilience can be most closely observed in a human capacity, which, as stated at the commencement of this thesis, was strongly suggested to be at the community scale ([Wilson, 2012b, p.10](#)).

2.7 Implications for this study

This research is primarily concerned with resilience change (and importantly issues of statis) that affect community livelihoods and wellbeing. This approach adopts a number of different theoretical understandings to describe and analyse notions of social resilience and change :

“Communities experience constant change from multiple sources. As change is constant, no community can presume a future without change.”

([Magis, 2010, p.413](#))

The broad concept of community definition is a highly contested area ([Brookfield, 2005](#); [Clay, 2007](#); [Delanty, 2003](#); [Ross, 2013](#); [UKGOV, 2012](#)) as discussed in Section 2.5. Practices of long heritage, tradition, culture, socio-

economic change and resilience building inform the contemporary situation in regard to the difficulties of economic survival and social resilience in many communities ([Jamieson, 2009](#); [Marshall, 2007b](#); [Marshall, 2007a](#); [Pelling, 2003](#)).

A possible unintended consequence in promoting community resilience is that of increased gentrification, as a community's asset value may increase as a result ([Colburn & Jepson, 2012](#)). Hence, influxes of newcomers may benefit from resilience building but to the detriment of indigenous populations ([Freeman & Cheyne, 2012](#); [Jacob & Witman, 2006](#)). This is an important critique which will be discussed later in regard to research questions involving fishing communities encountering issues of implementing pathways of resilience ([Adger, 2011b](#); [Ungar, 2008](#); [Ungar, 2011](#); [Wilson, 2012a](#)). Communities may 'consciously' or 'unconsciously' pursue resilient and vulnerable pathways in improving a community's abilities to withstand shocks in a pre-emptive, anticipatory and post-learning event basis ([Adger, 2000](#); [Adger et al., 2005](#); [Wilson, 2012b](#)). This resilience building on a community or 'tribal' basis is an anthropological phenomenon of 'normal magic' discussed earlier and, importantly, hinges on various roles of leadership in building resilience ([Brand & Jax, 2007](#); [Buzzanell, 2010](#); [Masten, 2001](#)). In regards to communities in general, Masten ([ibid.](#)) submits that the prospect of resilience offering a positive outlook for community action based on the normality and power of human adaptation offers better prospects than conveying the idea that 'rare and extraordinary processes are involved'. Masten's suggestions ([ibid.](#)) underpins the human expression of implementing pathways of resilience building ([Davidson, 2010](#); [Gunderson & Holling, 2002](#); [Mort, 2005](#)). Complexity and resilience theory is further observed in other research in resilience pathways and community mobilisation useful in this research

([Alvial-Palavicino, 2011](#); [Andreas, 2010](#); [Cabezas, 2004, p.37](#); [Costanza et al., 1993](#); [Folke et al., 2010](#); [Holling, 1994](#); [Rotmans, 2009](#)).

Following on to this community narrative, other questions that arise include what are the 'real things', such as ideas, processes or physical change, that communities really need to do promote, change or acquire in order to build and implement pathways of resilience ([Brand & Jax, 2007](#); [Collier, 2012](#); [Dahle, 2007](#); [Geels, 2007](#)) ?

Research questions include whether some 'honeypot' communities are more likely than others to be able to endure external or internal shock, and if they are struggling to develop resilient pathways. To clarify, 'honeypot' in this context means a community that attracts large numbers of tourists or people seeking to live there ([Murphy, 2013, p.39](#)). This may stem from a historical connection to a past activity such as mining, wine making or fishing, or a 'relic' or 'cultural icon' connection ([Brookfield, 2005](#)), or it may constitute a large scale 'manufactured' attraction such as 'Flambards' or the Lands' End tourist attraction in Cornwall ([Nagle, 1999, p.106](#)). In a different but linked context, a community may also attract funding based on its connections to active or inactive fishing status on a spectrum from active commercial fishing to cultural heritage value. Fishing communities may also be vulnerable to gentrification which may or may not have links to the previously described 'honeypot' question ([Jepson, 2007](#)) as part of either a typological approach or a resilience impacting process. 'Gentrification' can be described as an external key driver in coastal community vulnerability as well as the gentrification of urban communities ([Bodin & Crona, 2008](#); [Clay, 2007](#); [Colburn & Jepson, 2012](#); [Jacob & Witman, 2006](#)). Gentrification frequently leads to the 'migration out' of traditional residents and the 'migration in' of new residents leading to fragmentation of extant social networks and

traditional practices and values in e.g. North American and New Zealand aboriginal communities ([Colburn & Clay, 2011](#); [Freeman & Cheyne, 2012](#)).

Holistically orientated approaches may benefit interdisciplinarity in social resilience and community research. This is an important factor to consider in understanding resilient pathways in communities and informs research design. Resilience provides a critical lens into the relationship between communities and other levels of society covering regional, national and global scales of resilience and vulnerability ([Adger, 2000](#); [Wilson, 2012b](#)). Vulnerability can be conceptualized as a composite of exposure to hazard (or shock) and resilience, or the ability to manage the hazard.

As discussed, the notion of human agency distinguishes social from ecological systems ([Davidson, 2010](#)) and resilience frameworks should pay careful attention to human agency and the aforementioned issue of complexity ([Davidson, *ibid*](#)). Human agency and self-organization are, thus, critical factors in the resilience debate ([Adger, 2010a](#); [Bandura, 2000](#); [Kebza, 2008](#)) which 'shape' social systems. This also informs a further research question as to whether 'informal' community leadership is a prime factor in community resilience building ([Brand & Jax, 2007](#); [Gutierrez, 2011](#); [Walker, 2002](#); [Wilson, 2012a](#)).

As discussed, typologies are described as 'organised systems of types' ([Collier, 2012](#)) and a question that also arises is whether or not normative resilient (or vulnerable) attributes can be assessed as part of a community typology (in regards to an inherent balance of social, political, natural and economic capital). A potential typology spectrum of fishing communities may express fishing values both from a 'relic' (i.e. where commercial fishing has ceased but there is evidence that fishing once took place in the community) through to an active fishing practitioner

community perspective. As Brookfield ([2005](#)) suggests, a reduction of independence stemming from a loss of fishing activity on a community basis may influence identity and resilient attributes such as co-operation and the sharing of resources and risk ([Marshall & Marshall, 2007](#)). Resilience may also be directly influenced by drivers at the individual level ([Buzzanell, 2010](#)) and have links to wider social, NGO and governmental agency such as the UK government fisheries policy through national and local interpretation of EU Common Fishing Policy (CFP) ([Symes, 2009b](#); [Symes & Hoefnagel, 2010](#)).

The adoption of alternative transitional pathways (such as changes in marketing practices and alternate methods of income) may assist community resilience building and retain the intergenerational transfer of fishing skills and independent thought. The identification of relevant community typologies focused on social resilience would assist in understanding how communities react to shock from both fast and slow-onset perspectives. Research design would benefit by linking and demonstrating causal inferences through a reflection of social disturbance and changes.

This struggle to implement pathways of resilience building is strongly linked to social memory from two initial stances. Firstly, that social memory and learning has been lost through market forces that may disincline fishers to share local knowledge. In times past, shared knowledge was likely a powerful tool in community success by building resilience by shared resourcing across an entire community ([Gale, 1996](#); [Wilson, 2012a](#)). This sharing has been replaced substantially in modern times through competitive fishing and capitalism.

Secondly, and also linked to social memory, is the view that a physical reduction in the numbers of fishing communities and gentrification has caused

knowledge to be lost and adaptive capacity to be reduced by disturbances to fishing communities ([Brookfield, 2005](#); [Clay, 2007](#)). On the positive side, the maintenance of social memory can be conserved within 'relic' fishing communities through links to tradition and history ([Berkes & Seixas, 2005](#)). How this may influence the retention of resilience building of fishing communities is largely not understood at this time.

Policy aspects for resilience in UK communities are sometimes locally driven and informed from many sources such as the Transition Towns Network ([Hopkins, 2011](#); [Wilson, 2013](#)). Governance also plays an important role in resilience, the National Framework on Community Resilience ([UKGOV, 2011a](#)) has been criticised in its generic approach to local issues. This is an important issue in this research through issues of multi-scalar resilience, specificity and power configurations.

Rob Hopkins reflections on this framework ([Hopkins, 2011](#)) yielded several important observations. Firstly, he observed that community resilience is critically important to communities. However, there is no formal governmental funding process to assist with this. Secondly, the best people to organise and enable community resilience are those communities themselves. Thirdly, little thought appears to be given to the practicalities of enhancing community resilience by actually engaging people in meaningful work. Lastly, he ([ibid.](#)) observes that communities need to figure out themselves what they need to build resilience for. Further, he suggests that the 'spirit' of the framework is that the onus is on communities to organise around resilience as part of the 'Big Society' programme. This programme (initiated in the David Cameron government) has received much criticism as unworkable in an age of economic cuts and austerity ([NewStatesman, 2011](#)).

Thus, there are many issues and considerations to take into account in the design of this research now discussed in the methodological chapter.

3 Methodology

3.1 Introduction

The purpose of this chapter is to describe the methodological approach applied to this research. Good research design is fundamental to articulating the theoretical connections of research objectives coupled to theory and is a fundamental tenet of good research incorporating both inductive and deductive methods ([Maxwell, 2004](#)).

This chapter begins with a review of the research design and approach, followed by the case study design. The mixed methodological design is then discussed in depth. Next, the limitations of this research are considered, followed by a discussion on reflexivity and positionality. Finally, ethical considerations are evaluated.

3.2 Research design and Approach

3.2.1 Overview

This research is focussed on the adaptive capacity of Cornish coastal communities and the drivers that influence the resilience and vulnerabilities of these communities to change through economic, social, political and natural factors. Communities may adapt to change through different means or have commonalities in approach. Responses may occur deliberately or accidentally and evolve simply, or ranging to multi-factorial and multi-scalar complexity. The research design reflects methods of identifying and understanding drivers and their impacts over short and long timescales from the grounded perspective of community members. This

includes businesses, fishers and residents, as well as other groups of interest ([Marshall, 2007a](#)). A need exists to identify social, business and governance drivers to inform the research of the issues and concerns that may have contradictory perspectives among these groups. Tensions may be identifiable across 'communities within communities' e.g. different social groups with contrasting asset ownership capability and exogenous and endogenous pressures. The design needs to be broad enough to capture information across a diverse set of community 'groupings' and deep enough to capture the detail needed to inform this research. With this in mind, a mixed-method approach was consequently adopted discussed further in Section 3.4. Geographically, this research was situated in the Cornish Peninsula of the UK. The field research scope was confined to coastal communities with some evidence of past or current commercial fishing and the use of historical fishing heritage.

Thus, the research design challenge was to capture both trends and levels of detail that may be shared or unique amongst a set of Cornish fishing communities and informed through adaptive capacity building, coping strategies and trajectories.

3.2.2 Design overview

To recap briefly from Chapters 1 and 2, little social resilience research within fishing communities has been undertaken in the UK. Cornwall, specifically, has received an extremely low research contribution in this area. Community coping strategies have developed to encompass tourism and associated commercial activities often representing communities as cultural fishing icons rather than through active fishing. Hence, communities with varying levels of dependence on fishing activities may be identified as both 'virtual' and 'real' fishing industries ([Brookfield, 2005](#)). This can be interpreted in resilience terms as building resilience through

commercial fishing in varying degrees through these 'real' and 'virtual' fishing practices. A crucial aspect of this research is that of how resources are utilised by fishing communities, and how they respond to change. This adaption to change is derived from the precept that close relationships exist between social resilience, resource dependency and the institutional context ([Adger, 2000](#); [Marshall, 2007a](#)). Resource usage is both the use of natural resources such as fish stocks, landscape and the ocean as well as human-built infrastructure such as harbours.

Thus, this research raises questions relating to resource dependent fishing communities that have an evolved variable dependency on fishing from a heritage resource perspective as 'virtual' fishing communities ([Brookfield, 2005](#)). From a succession continuum perspective, Brookfield ([ibid.](#)) speculates that it appears, in some UK fishing communities, that a 'virtual' fishing industry has succeeded the 'real' fishing industry which is a key consideration in this research. This research is concerned with the balance, or tension between the impact of social, natural, political and economic drivers of change (initially) within fishing communities, coupled with the utilisation of heritage or 'relic' assets such as buildings and culture in geographically bounded fishing communities in Cornwall.

3.2.3 Epistemological and ontological considerations

Epistemology as a philosophical context is a theory that examines the nature and extent of knowledge. It asks questions such as, what is knowledge, how it might be acquired, what we know and how do we know we that we know it ([Hofer & Pintrich, 2004](#); [Kirkham, 1992](#); [Piaget, 2001](#)). Plato conceptualized knowledge as the interface between belief and truth illustrated in Fig. 3-1 ([Perla & Parry, 2011](#))

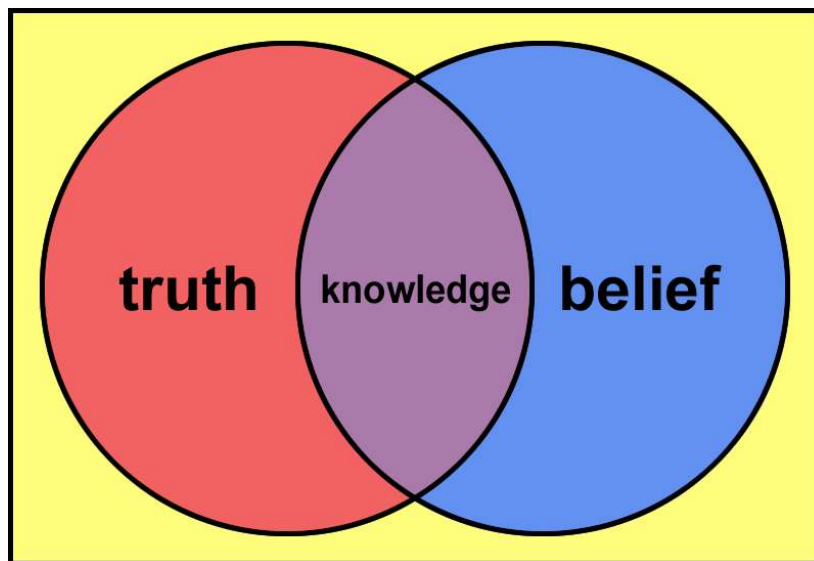


Figure 3-1 : Truth, knowledge and belief - Source : ([Perla & Parry, 2011](#))

Ontology is concerned with the study of being, existence or reality. It is rooted in the theory that to be ontologically secured, an individual has to locate his or herself in life and experience within a larger context. This can entail the grouping of entities into hierarchies that are sub-divided according to similarities and differences into the formation of perceived reality. The three levels of ontology are that of empirical approaches (perceptions, impressions and perceptions), actual approaches (events and states of affairs) and real-deep ontological approaches (structures, mechanisms, power and liabilities) ([Smith, 1998](#)). Ontology seeks to classify entities and, typically, may produce theories similar to scientific theories, but of a more general nature. Thus, ontology can provide a framework for cross-disciplinary collaboration between different domains of science systematically ([UCSB, 2012](#)).

This research is empirically based, using the model as described above with ontological conceptualisations 'grounded' within an empirical epistemology.

Empiricism is a fundamental assumption of positivism and logical positivism ([Harrison & Livingstone, 1979](#); [Popper, 2002](#)). This research views empiricism through an 'ontologically privileged' lens in adopting the assumption that observational statements can validate phenomena in the real world ([Johnston, 2000](#)).

The purpose of this thesis is to produce 'warranted knowledge' or the ability to defend and justify claims made in the research when claims are challenged ([Flowerdew & Martin, 2005](#)). Human geography commonly features methodological diversity using e.g. varied perspectives to focus on linking research to philosophical debate to increase claims on methodological validity. Research design may involve the separation of research effort into groups from a theoretical and data perspective, at least at the early stages. At a later stage, data is compared to determine group similarities and differences. Such a method can also be used to observe change by intervention processes outside the laboratory. This is known as a naturalistic approach. The non-interventionist approach adopted in this research is also referred to as comparative design ([Richards, 2007](#)). The rationale for selection of a triangulated methods further discussed in Section 3.4. As this research is non-interventionist in design, the naturalistic method is rejected in favour of a triangulated approach ([Flowerdew & Martin, 2005](#)).

3.3 Case study approach and selection

3.3.1 Case study approach

This research seeks to investigate the research questions in an inferred and explanatory way through the adoption of 'how' and 'why' orientated questions applied to observed phenomena. This favoured the use of case studies over experimentation

approaches ([Yin, 2009](#)). Case studies focus on contemporary events with a view to a non-reductionist, holistic approach retaining complexity and contextual richness. A case study has been defined as the intensive study of a single research unit with an aim to generalise across a larger set of research units and that each unit is spatially bound ([Gerring, 2004](#)). Case studies thus allow a useful method to capture real life events and processes :

“In brief, the case study method allows investigators to retain the holistic and meaningful characteristics of real-life events such as individual life cycles, small group behaviour, organizational and managerial processes, neighbourhood change, school performance, international relations, and the maturation of industries.”

([Yin, 2009, p.4](#))

The determination of an appropriate number of cases for a research study is a vexed one ([Gerring, 2004](#); [Gerring & McDermott, 2007](#); [Shulman, 2008](#); [Yin, 2009](#)). Gerring ([2007](#)) argues that the evaluation of different units which exist, or have existed, in the same general social context, may be best methodologically described as multiple units within a single case. Gerring ([ibid.](#)) also illustrates this through the example of the American Revolution as a base study with the addition of the French Revolution as a referential study unit within the same case. This proposition is consistent with Yin’s case design of a single case with multiple embedded ‘units of analysis’ as research scale entities ([Yin, 2009](#)).

Gerring ([ibid.](#)) argues that the selection of a mode of case study might benefit from consideration of the level of inferences relating to the unit of analysis. He also maintains that if a common inference exists in regard to the units of analysis, that the units of analysis should reside in the same single case model as embedded ‘units’, especially for small numbers of ‘units’. This is the situation in this research. A small

number of fishing communities were assessed and common inferences about heritage, business, resource usage and social understandings may indeed reside across all these communities. Further, Gerring ([ibid.](#)) promotes the adoption of temporal and longitudinal studies for important inferential separation. Hence, an appropriate research strategy was to adopt a single case model with embedded fishing communities as a functional part of this research design to allow inferential comparisons within a single case.

Gerring ([ibid.](#)) argues that there are seven key questions to answer in the affirmative if considering the use of case studies methodologically :

1. When inferences are descriptive rather than causal.
2. When depth of research is preferred to breadth.
3. When internal case comparability is needed, rather than cross-case representation.
4. When insight into causal mechanisms are more important than insight into causal effects.
5. When the causal proposition at issue is more invariant than probabilistic.
6. When the research strategy is exploratory rather than confirmatory.
7. When useful, variance is available only for a single unit or a small number of units.

The adoption of a case study approach in this research was broadly supported through consideration of these seven characteristics. Each one of these characteristics favours the use of case studies in the context of this research design.

Case studies may provide multi-perspective analyses and triangulated research strategies focussing on groups of actors and the interactions between them

(Feagin, 1991; Stake, 1995). Feagin ([ibid.](#)) asserts that the use of triangulation assists case studies in validating research processes, for example, multiple sources of data. Triangulation is discussed in more detail in Section 3.4.2.

3.3.2 Identifying case studies for this research

In selecting the subjects of study, the core design focus was across a 'spectrum' of fishing communities ranging from fishing dependency to dependency and utilisation of fishing heritage assets (see Fig. 3-2). The research approach adopted was to select case communities aligned to this conceptual spectrum, discussed in due course.

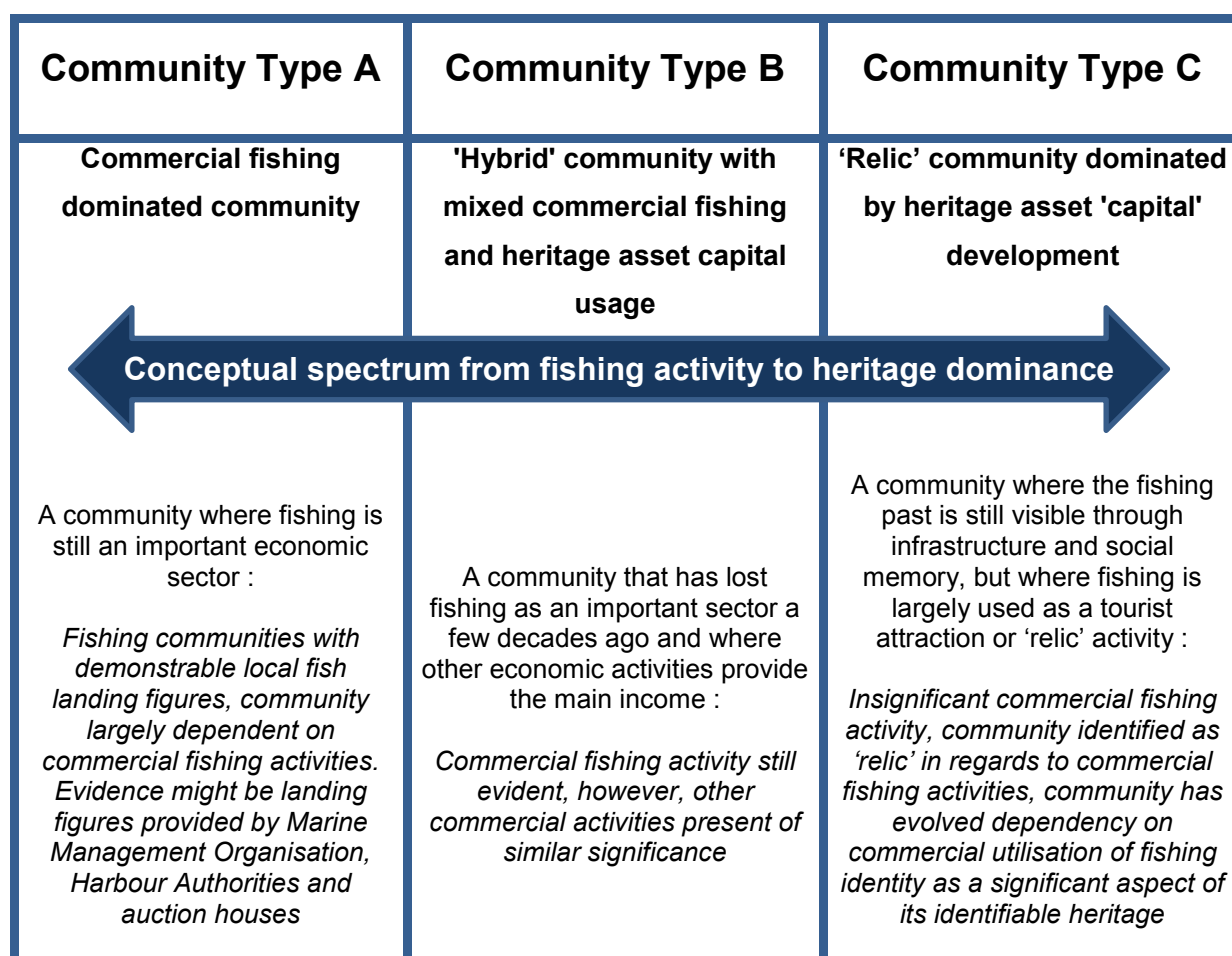


Figure 3-2 : Fishing and heritage spectrum - Source : ([Author](#))

The scale or level of this research's analysis was at the community level, defined in this research as a geographically constrained community. As discussed in Chapter 2, the reason for selecting the community scale is that this is where the most direct expression of resilience is thought to take place with the exception of individuals or households ([Wilson, 2012a](#)).

Within this community scale of analysis, the spectrum was designed to provide a distribution of perspectives across communities with varying degrees of identifiable commercial fishing in relation to heritage capital. Fishing communities may have moved in time along a trajectory towards a 'relic' status as a response to fishing resource dependency towards other forms of livelihoods. This may either support fishing activity or create a shift away from it. Evidence of these responses may not be easily identifiable, may be emergent and developing, or may be mature and historical. Actors within fishing communities may adapt to survive, or when not under economic pressure may increase their resilience as a deliberative strategy. 'Adaptive switching' is of interest in resilience building ([Bradley & Grainger, 2004](#)). This spectrum perspective underpins the selection process for the community studies. Fig. 3-2 expresses this transition as a two-way process. Research suggests that this conceptual transition may move in either direction, leading to different forms of livelihood dependency. Evidence of a trajectory from 'right to left' has been expressed within other countries (e.g. Florida, USA) ([Jacob, 2005b](#)). However, only the 'left to right' transition was apparent at this time in Cornwall. Fig. 3-2 also shows the overall criteria adopted in selecting the case study communities in this research.

Coastal fishing communities are in a process of continual change through adaptation, response to stress and transformation in their fishing activities and life onshore. Using the concept of a spectrum, spanning the tension between fishing and

heritage activity within geographically bounded communities ([Brookfield, 2005](#)), a set of criteria was assembled to reflect this spectrum for addressing community selection, research questions and hypotheses.

In order to estimate an appropriate number of community studies based on these three categories, the minimum number of case communities was logically three, one case study community per community type.

This research design was intended to promote triangulation and cross referencing from several perspectives, following the mixed methods approach which is addressed further in Section 3.4.2. This had a direct influence on the decision of how many case study communities could be effectively utilised considering research time and effort. With this in mind, and to obtain the maximum depth of analysis at community level using mixed methods, the optimal number of community studies was determined at one per community type, totalling three case community studies. The selection process for the three geographically defined coastal fishing communities was assessed using a further set of criteria steered by the spectrum and the detailed criteria defined within Fig. 3-2.

A key consideration of this research was to gain a meaningful understanding of the social issues, tensions and harmonies of a cross-section of fishing communities in Cornwall. This assisted in obtaining statistically meaningful data as well as being of a 'manageable size' for the coupling of geographic area and research depth delivery over the research time window. Desk based research was undertaken to locate candidate communities in Cornwall based on the criteria in Fig. 3-2, which addressed the community spectrum discussed to this stage. Table 3-1 shows the final list of ten candidate communities.

No.	Community Name	Type A	Type B	Type C
1	Cadgwith Cove		X	
2	Falmouth	X		
3	Fowey		X	
4	Helford			X
5	Looe	X		
6	Mevagissey	X		
7	Mousehole			X
8	Newlyn	X		
9	Polperro		X	
10	Portscatho			X

Table 3-1 : Cornish fishing communities : case study final candidates – Source : [\(Author\)](#)

A desk-based study was undertaken on a broad selection of fishing communities in Cornwall meeting these general criteria. This list was reduced in number further using the table criteria to produce a short list of ten candidates (see Table 3-1). Using these ten candidate communities, a more refined and detailed assessment was undertaken to select the final three communities further using the criteria highlighted in Fig 3-2. For example, Newlyn, Falmouth and Mevagissey were considered as ‘Type A’ candidates. Falmouth fishing operations were not isolated to an easily delimited geographical area, and Newlyn had become subject to significant research saturation over the last decade, while Mevagissey expressed all of the base selection criteria shown in Fig. 3-2. Other criteria utilised were having a defined harbour area, commercial fishing activity of some degree, the presence of a harbour authority and some geographical separation of final selections.

A confirmatory field trip was undertaken to confirm the case community selections ‘on the ground’. A meeting and discussion then followed with the research partner, the CFPO in Newlyn to discuss and agree the final case communities. This was not an exhaustive analysis across all Cornwall fishing ports. However, the

criteria were used to select communities to support the research objectives in appropriate terms.

The three communities selected for study were Mevagissey as the representative ‘Type A’ community, Polperro the ‘Type B’ and Mousehole as the ‘Type C’ community respectively (see Table 3-1, Fig. 3-2, and Fig. 3-3).

The communities selected roughly conformed to their ‘position’ within the conceptual spectrum (Fig. 3-2). Fig. 3-3 shows the geographical locations of the three selected case study communities in the Cornish peninsula.



Figure 3-3 : Selected Cornish case communities – Source : adapted from ([Digimap™](#))

Whilst not fully prescriptive, the community selection was made as valid as possible without engaging in extensive research effort. Mousehole was the ‘exemplar’ for a ‘Type C’ fishing community that has shifted towards ‘heritage economy’ dominated community, Polperro represented a ‘Type B’ community that shares some fishing activity and heritage, whilst Mevagissey was a ‘Type A’ community, bustling

with fishing activity while also expressing its heritage. The following discussion provides a brief description of the three communities under study.

3.3.3 Geographical case community areas

All community research took place within the geographical boundaries defined by census map zones ([ONS, 2011a](#)) in the case study communities (see Fig. 3-3). These selected zones corresponded well with a rational view of demarcation of village boundaries and provide the basis for community sampling strategies and secondary census data utilisation. An FOI⁸ request ([CCC-FOI, 2013](#)) was made (through this research) to Cornwall County Council for further housing data, especially holiday homes which do not feature in ONS data as they constitute business data. The populations of the zones from the ONS data were determined as Mousehole at 911, Polperro at 1,206 and Mevagissey at 2,117 (or a population ratio of approximately 0.4 : 0.6 : 1.0 respectively).

Community Study 1 – Mousehole (Type C)

Mousehole is a small fishing village close to Penzance but in close proximity to the major fishing port of Newlyn. Mousehole was once an extremely prosperous fishing village based on fishing activity along with several other forms of livelihoods including market gardening, quarrying and agriculture ([Buttery, 2012](#)). In the early 20th century, harbour development infrastructure investment in adjacent Newlyn changed the dynamics of the area and fishing activities rapidly moved to Newlyn,

⁸ FOI – Freedom of Information (Act) is an information request that can be made to UK Government bodies.

which consequently expanded rapidly ([Cornwall-Online, 2016](#)). Mousehole now predominantly utilises its fishing heritage capital as an attractive tourist destination, with famous icons such as the book and animated film 'The Mousehole Cat' ([Barber, Bayley & Bawcock, 1990](#); [Collis, 2008](#)) and the unique delicacy of Stargazy pie, and, indeed, it's characteristic pronunciation, 'Mowzel'⁹. Mousehole has a well-protected harbour that partially dries out and shelters small boats. It is a predominantly tourist location with small, close packed houses and ensuing traffic constraints. Mousehole enjoys a long tradition at Christmas each year, the festival of lights that is an important seasonal business and social high spot in the quiet winter period. Mousehole was described by the poet Dylan Thomas as the 'loveliest village in England' ([WMN, 2014](#)) and who was a frequent part of the cultural community around Mousehole. Thomas was a frequent visitor to the Ship Inn and celebrated his honeymoon in the Lobster Pot pub, which is now converted to holiday homes ([NewQuay-WW, 2016](#)). The harbour and the wooden infrastructure that supported the quayside were protected in the winter by massive wooden beams or 'baulks' which were slotted into the harbour entrance and removed at Easter each year and replaced for the winter. Thus, the harbour was not truly available for use in the winter months and some fishers moved their boats to Newlyn for winter fishing. Boats staying behind the baulks were shifted to land in the car park for the winter. There were four key social hubs in the village, the Ship Inn, the British Legion Social Club, one Methodist Church and a Post Office. There was no community centre although strenuous efforts were underway to refurbish a disused fishing gear loft (which came to fruition towards the end of this research). Second and holiday homes were evident in this community. This has produced tensions amongst the indigenous community

⁹ 'Mowzel' is thought to be derived from an old Arabic word for water ([Buttery, 2012](#)).

over the last generation (see Chapter 6). The MP for Mousehole at the time of this research was Andrew George (Lib).

Community Study 2 – Polperro (Type B see Fig. 3-2)

Polperro also has a rich fishing heritage and has an active fishing community based around 14 fishing vessels at the time of the research. These vessels were predominantly sub-ten metre vessels with two large scallopers and a small trawler. The village expresses its fishing heritage through its smuggling and fishing past, while its small fishing community can be seen actively engaging with their trade, using various modes of fishing from scalloping and potting to netting and utilising cold storage facilities on the quayside. Polperro is situated in East Cornwall, four miles West of Looe and has a small harbour for small boats and two quite significant fishing vessels for the tightly constrained harbour. A sea protection gate had been installed by the Environment Agency, affording the inner harbour protection against severe winter storms. Fish landed in Polperro were predominantly sold through the Plymouth fishing auction house¹⁰. Polperro is characterised by a dominating car park at the head of the Polperro valley, this car park has created significant tension in the village further highlighted in Chapter 6. The social hubs of the village are essentially the British Legion Social Club, the Blue Peter and Three Pilchards pubs, the parish church and a village hall. The MP for Polperro at the time of this research was Sherryl Murray (Con).

¹⁰ Personal communication with Polperro Harbour Master.

Community Study 3 – Mevagissey – (Type A see Fig. 3-2)

Mevagissey is also a fishing community of historical significance with natural inner and outer double harbours offering vessels weather protection year round. The outer harbour, when exposed to easterly gales, leads to rough conditions for moored boats, hence the inner harbour was built to provide shelter to fishing vessels. Mevagissey has a significant fishing fleet of over sixty vessels and a catch value of over £2 million in 2011 ([Cornish Guardian, 2016](#)), the second largest in Cornwall next to Newlyn. The outer harbour is suitable for larger boats including fishing trawlers and the Fowey Ferry while the inner harbour provides greater protection for smaller boats. There was a small fish market on the harbour providing local licensed seafood, mainly to visitors. Mevagissey has a proud and rich heritage from commercial and tourist fishing and was a shark-fishing centre until the shark population became denuded and protected in the 1970s. Its selection as a case study was partially based on its significant fish landing figures in recent year. The social hubs of Mevagissey included the Wheelhouse restaurant, the Ship Inn, the Harbour Inn and the Mevagissey Social Club that was an important 'social anchor' in this community. Mevagissey marketed its fish primarily through the Plymouth auction house. The MP for Mevagissey at the time of this research was Stephen Gilbert (Lib).

3.4 Methods

This section outlines and details the different data collection methods used in the community study. These data were derived from mixed-methods field work coupled to secondary sources. This section also outlines the timescales of the

research and themes identified from the aims and objectives along with their relevance in the research design, constraints and research operationalisation.

3.4.1 Research socialisation

The author socialised the research within each community by a combination of displaying posters on community notice boards and shops ([Taylor & Cheverst, 2009](#)) and verbal engagement with all community members. Thus, there was a focus on the social hubs and ‘areas of agency’ in the communities ([Eversole, 2011](#)) including the Post Office and Harbour Master. The author also engaged the relevant Cornish MPs and County Councillors for each community as well as local parish councils in promoting and undertaking the research. Wider research engagement was also undertaken through speaking at several conferences and sponsor events including a session speaking at the Royal Geographical Society International Conference in 2013 (London) and Montpellier (France) 2014 that further helped in socialising the research and engaging others.

3.4.2 Mixed methods and triangulation

In order to mobilise the research aim and objectives (see Section 1.3), a mixed-method approach was adopted. This was composed of an initial desk assessment to evaluate potential community study sites, followed by three community studies in the selected communities. The research concept known as triangulation refers to the use of multiple perspectives through studies which ‘meet’ or encounter each other in some respect to increase validity or challenge extant theory ([Flowerdew & Martin,](#)

[2005](#)). This may be undertaken by using varying methods to elucidate the same question ([Richards, 2007](#)) and was a critical design aspect in this research.

The methodological design underpinning this research was structured to provide a balanced, mixed methods approach, so that the research questions could be articulated by observing the 'lived lives' of residents, business, governance and the heritage engagement of selected fishing communities. Building on this design, mixed methods allowed different perspectives and triangulation to increase the validity of the research ([Flowerdew & Martin, 2005](#)). A mixed method approach was designed using both 'rich' qualitative and a small degree of quantitative methods to allow increased depth of understanding, corroboration and validation ([Creswell, 2008](#)).

Mixed-methods was considered as an appropriate choice, supported through observational and visual methodologies and in-depth qualitative interviews with participants from key community groups. Building on Adger et al. ([Adger, 1999a](#); [Adger, 2000](#); [Adger et al., 2005](#)), each of the in-depth approaches was based on the use of specific predominant qualitative methodologies to obtain specific and informed community contexts. The use of mixed methods in human geography is credited as a method to build upon efforts to bridge qualitative and quantitative debate and confront epistemological and methodological questions whilst informing reflective practice ([Delyser, 2009](#)). Mixed methods were embedded in a conceptual single case study in this research in order to inter-relate research data as findings from individual community studies. The research design is that of a single case model with multiple embedded units ([Yin, 2009](#)) (see Fig. 3-4). The single conceptual case in this research contains three embedded fishing communities.

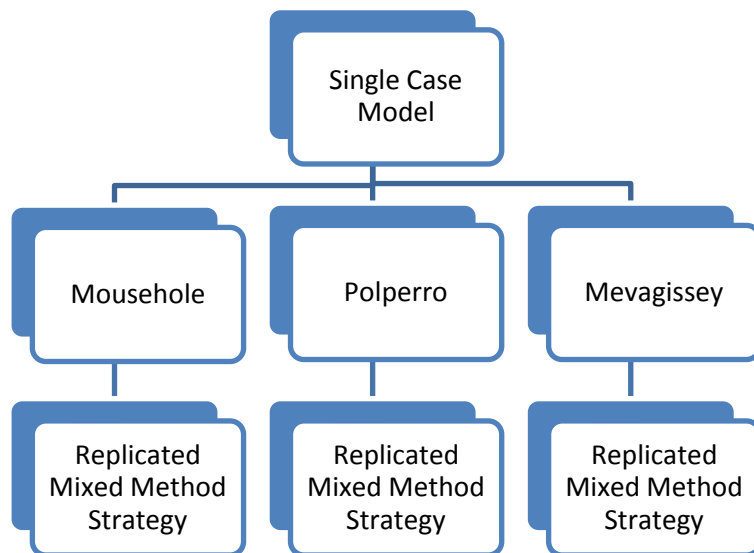


Figure 3-4 : Case study design – Source : ([Author](#))

Each of these community studies adopted a replicated (common), although disproportionate, strategy of mixed methods as depicted in Table 3-2.

Table 3-2 illustrates the individual methods adopted in this research. Each of these methods will be further detailed in following sections, preceded by an overview of the timescales of the research.

Mixed methods used in this research
1. Semi-structured interviews (Qualitative)
2. Questionnaires (Qualitative and Quantitative)
3. Participant Observation Methods (Qualitative)
4. Visual Methods (Qualitative and Quantitative)
5. Secondary Sources (Qualitative and Quantitative)

Table 3-2 : Mixed methods adopted– Source : ([Author](#))

The four primary research methods (not including secondary sources) adopted in this research, semi-structured interviews, questionnaires, observation and

visual methods (see Table 3-2) were selected to provide a combination of comparative, cumulative and progressive methodological community views. However, the key research method adopted in this research was that of the use of semi-structured interviews to provide a community narrative on the emergent resilience and vulnerability issues discussed in Chapter 7. These emergent issues drive the context of the typology later adopted in Chapter 8. The use of questionnaires was adopted to initially 'flush out' community issues through the use of a combination of multiple choice Likert style questions and an open response component (see Section 3.4.3 and Appendix A).

This mixed-format questionnaire (a combination of Likert and open responses) formed a basis for an iterative approach to the development of the both questionnaires through the pilot study, and to the creation of the semi-structured interview guide (see Appendix B).

This approach proved to be encouraging in driving out the salient issues in the first community, Mousehole, using the questionnaires. For example, emergent community issues (e.g. second home impact, poverty) were adopted within the next phase (i.e. integrated into the semi-structured interview guide). This also proved of value when undertaking the same fieldwork within Polperro and Mevagissey through further interview guide refinement. Thus, the methodological approach in this research is 'interview-centric' and the other components of mixed methods provided supporting data for the semi-structured interviews. An ongoing process of community observation (see Section 3.4.5) was extremely useful in underpinning and cross-validating emergent issues with the questionnaires and interviews, providing a rich resource to draw from for 'embedded researcher' fieldwork. This also created many 'connection points' for arranging interviews and following up on research 'hunches'.

The research socialisation (see Section 3.4.1) yielded mixed blessings, i.e. the research became very widely known and very quickly. This allowed better opportunities for interviews as the community had some extant knowledge of the research initiative but there was a trade-off in recipients holding 'prepared answers' in two cases, however this was very minor and, arguably, not a methodological inconsistency. Seasonality played a part in the collection of questionnaires and the conducting of interviews. As the summer season arrived and the community became increasingly busy with the increased demand for their time through tourism (e.g. retail businesses, B&Bs, seasonal workers), questionnaire return rates declined significantly in the case of Polperro (fieldwork in May, June and July)¹¹. This may also have influenced data collection opportunities. Mousehole exhibited the best questionnaire returns rate (25%), followed by Mevagissey (17%), with Polperro the lowest (7%) (see Table 3-6). Interview opportunities in Mousehole in the winter were good (13) and lowered as the summer commenced with the fieldwork in Polperro (9) and Mevagissey (9) (see Table 3-4). Target interview numbers were set (also see Table 3-4) increasing as the communities were sequentially engaged. This reflected the research aspiration that an increasing number of interviews could be conducted in the next community to be researched as the researcher increased his competence over time. However, the impact of seasonality and other factors (e.g. 'community research weariness') influenced these increasing targets, reducing the actual numbers of interviews and questionnaire returns as the research progressed through the summer months.

Perhaps the least successful element of the research was the use of visual iconographic methods. Some interesting visual issues emerged (e.g., how postcards

¹¹ Seasonality is likely not the only reason behind the low number of questionnaire returns in Polperro, there was some evidence of research 'weariness' from previous social research.

and imagery reflect aspects of perceived and ‘created’ community identity). However, this method could have benefitted this research by using further cross validation linked to business and community issues (e.g. decline of fishing, tourism service sector) informed by the questionnaire and interview data.

The research methods interweave substantially, the nVivo™ qualitative analysis tool was utilised to analyse the intersections between resilience and vulnerability within the primarily questionnaire and interview data. An example of this is the growth of holiday homes in Polperro that was cited by many respondents as a vulnerability in community cohesion through the qualitative component of the community questionnaires. The contextual understanding of the impact of holiday homes was substantially validated during the interviews, further triangulated by observations and discussions in the community. Mixed methods were mostly very effective in driving out the resilience and vulnerability issues in the case study communities providing a platform to validate emergent data.

As observed in Fig. 3-5, the three community studies took place over a period of nine months with three, three-month phases in 2013 when the researcher was actively working and embedded in each community.

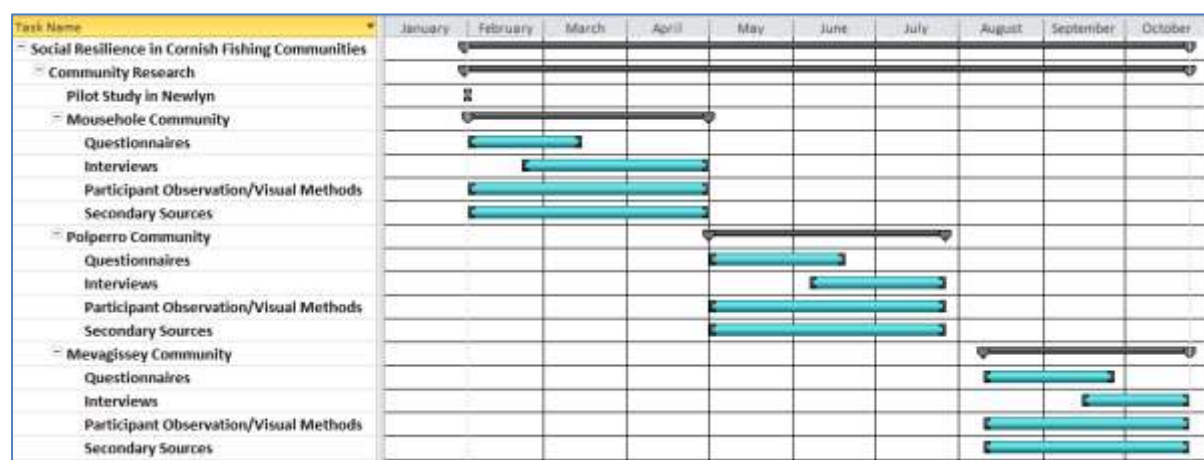


Figure 3-5 : Community research timeline, 2013 – Source : [\(Author\)](#)

The working aspects of these three-month research periods were not planned to low levels of time granularity. However, objectives were planned and these were worked to within these timescales. The sequencing of research events in each community was to commence the research initially using questionnaires, and then to build interview opportunities from this process and research socialisation. Hence, interviews followed questionnaires with a small crossover period (see Fig. 3-5). Participant observation and visual methods took place throughout the research period in each case study community. Secondary data capture e.g. the FOI to Cornwall County Council for specific holiday home data was undertaken at opportune times. This sequencing proved to be very useful in this research allowing the researcher to explore avenues of interest while adhering to planned methodological considerations. Most planning was based around reviewing objectives on a daily and weekly basis, and planning was then driven mainly by priority, weather, logistics and opportunity. This was especially important in a working community where people are busy in their day-to-day lives. The researcher approach was to work around the community and not vice versa and the researcher was conscious that he was a visitor but was mainly warmly welcomed and supported in all the communities.

This embedded and collaborative approach also works well with the notion of 'dreckly' which is discussed in more detail in Chapter 5. 'Dreckly' is a Cornish expression expressing that something will definitely happen, e.g. a commitment to mend a neighbours roof. It may be a week or a month before it starts, but it will definitely happen. This is an 'understood' in Cornwall and is sometimes difficult for new members of a community to grasp through 'imported short termism' cultural

expectations. This cultural trait is believed to have strong significance within social networks in Cornish fishing communities.

Semi-structured interviews are often preceded by observation, and informal and unstructured interviewing in order to allow the researchers to develop an understanding of relevant and meaningful semi-structured questions ([Cohen & Crabtree, 2006](#); [Taylor, Bogdan & DeVault, 2015](#)). As previously stated, observational work and questionnaires preceded interviews to assist in the evolution of semi-structured interviews (see Fig. 3-5).

3.4.3 Questionnaires

Questionnaires are a common qualitative and quantitative tool used to collect data in human geography as primary data. These data should arise from a carefully considered set of research questions, objectives, design and execution. This may entail more effort to successfully deliver than might be first considered appropriate and this is a common error ([Flowerdew & Martin, 2005](#)). A commonly used questionnaire method is that of the initial research idea followed by the design, refinement, collection, analysis and interpretation of the results. Various types of data can be collected in regards to people and communities of people. These can be data that classify people, data that relates to the behaviour of people and data relating to the attitudes, opinions and beliefs of people ([Delyser, 2009](#)).

It was intended that questionnaires should (preferably) be undertaken on a personal 'one to one' basis. Although the method provided the ability to handle queries immediately and to engage directly with recipients, this method was more prone to bias than telephone, internet or postal methods ([Denscombe, 1998](#); [Flowerdew & Martin, 2005](#)) (see Section 3.6 for reflexivity discussion).

The motivation to use questionnaires in this research was multi-factorial. The prime driver was to validate, on an iterative basis, the impact of resilience factors by obtaining primary field data from the fishing communities. From this iterative approach the questionnaires provided further triangulated evidence to support the research ([Lai & Waltman, 2008](#)). This also encompassed methodological considerations in regards to structure and data ([Harris & Brown, 2010](#)). The questionnaires were broader and shallower than the interviews through their quantitative elements. However, the approach taken in this research was to provide a duality of open and closed questions, discussed in the following section providing deeper data in the qualitative section (see Appendix A for an example questionnaire). Each community was divided up into zones to facilitate the sampling strategy and determined by using UK government census data areas at the output level ([UKGOV, 2011b](#)). This permitted census data adoption within each community during analysis. The zones also served to determine the number of dwellings in each zone for sampling design purposes. These research-specific zones are shown in Figs. 3-6, 3-7 and 3-8.

The map labels are simple designations for each community to simplify the unwieldy ONS numbering system (e.g., ONS census output area ref. E00096009 was re-labelled MO2 in Fig. 3-6, the second Mousehole zone).

Questionnaires sampling was undertaken as a precursor to interviews in this research as discussed in Section 3.4.2 (also see Fig. 3-5). This, as stated, was important, in combination with early engagement of observational techniques, in early identification of possible interview question strategies and interview candidates prior to the interview process.

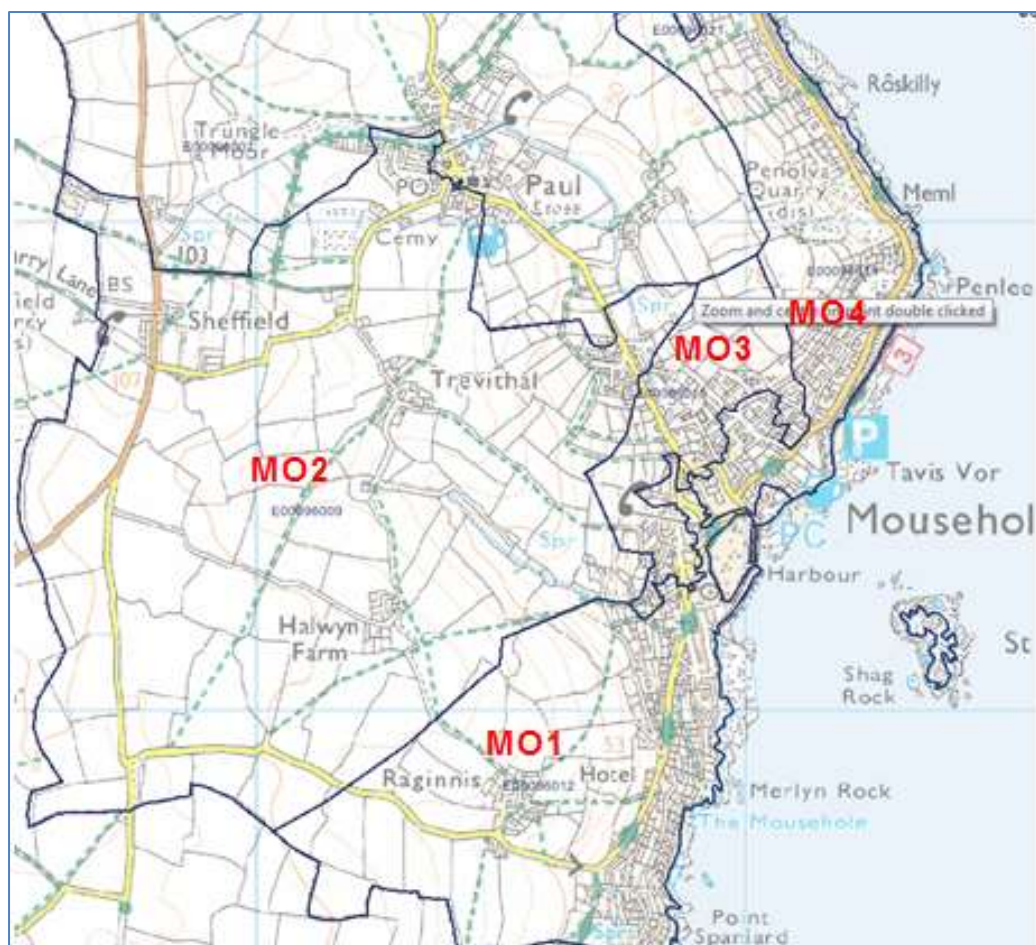


Figure 3-6 : Mousehole Case Study Area – Source : ([Digimap, 2014](#); [UKGOV, 2011b](#))

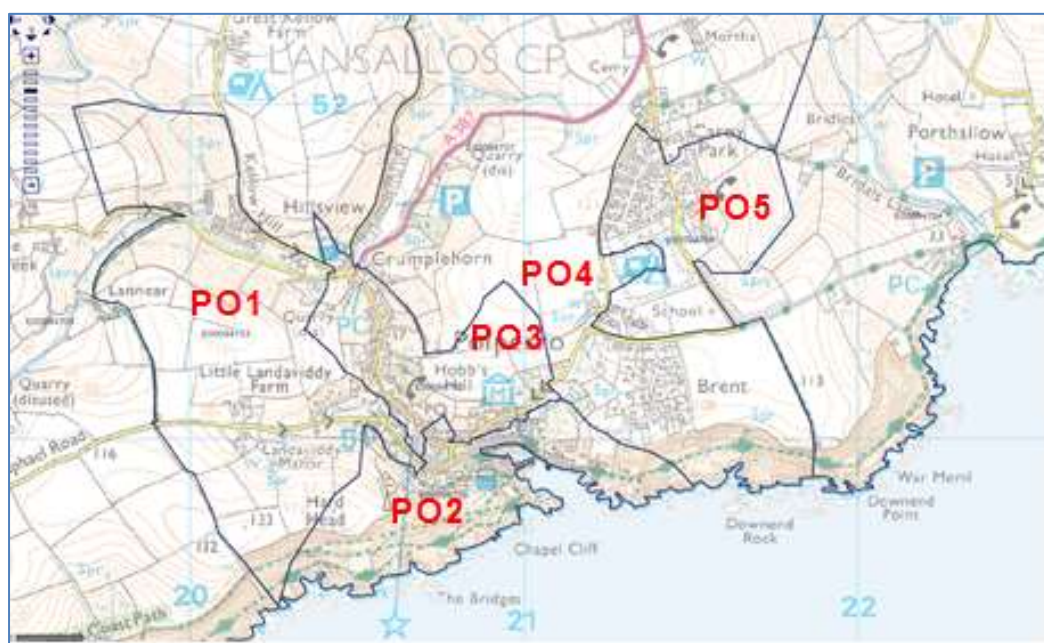


Figure 3-7 : Polperro Case Study Area – Source : ([Digimap, 2014](#); [UKGOV, 2011b](#))

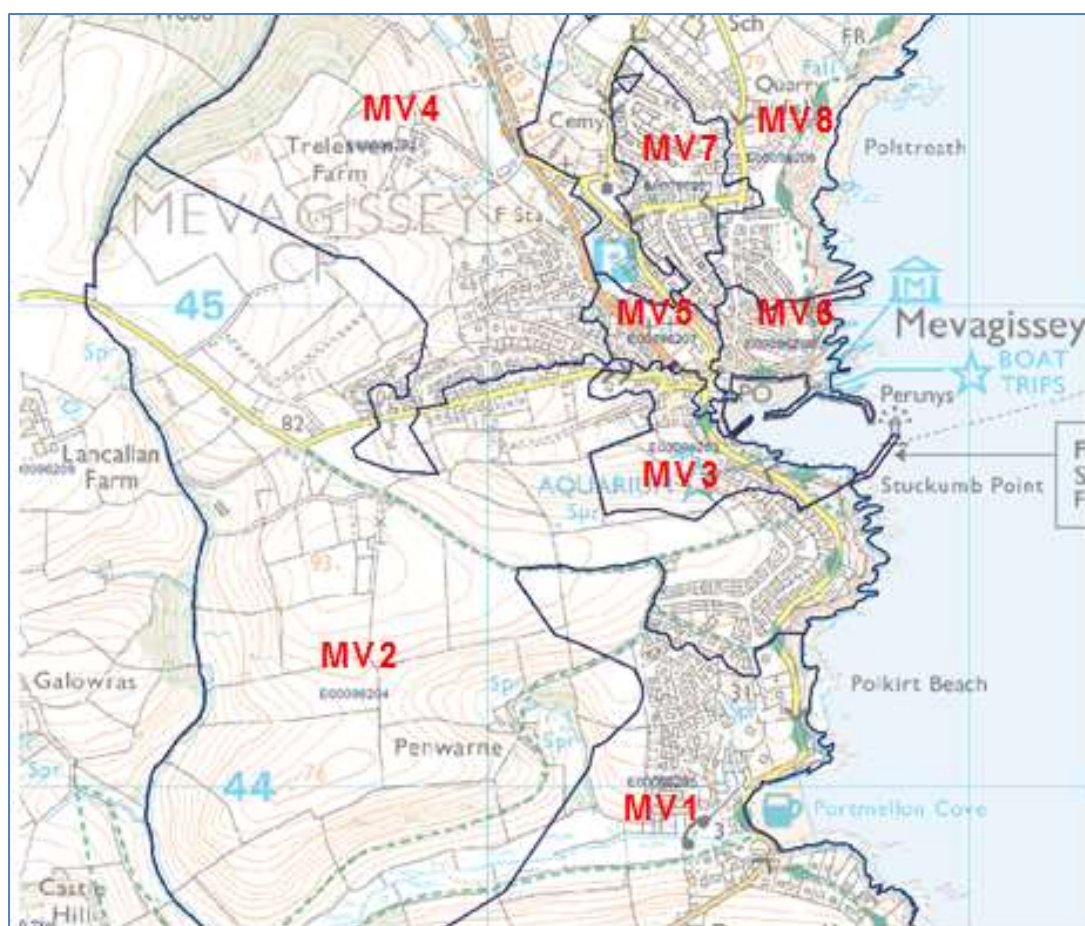


Figure 3-8 : Mevagissey Case Study Area – Source : ([Digimap, 2014](#); [UKGOV, 2011b](#))

Design

Each community was sampled with questionnaires using the four groups shown in Table 3-3.

Questionnaire Groups
1. Fishers (Pilot Only)
2. Business
3. Residents
4. Visitors

Table 3-3 : Questionnaire Groups – Source : ([Author](#))

This differs from the interview groups in that a) fishers were only sampled through the limited pilot study and b) visitors were utilised but not governance. Fishers were

not sampled for questionnaires as the researcher determined that deeper and richer discussion was necessary to respond to the aims and objectives of this research and a focus on interviews would be more appropriate. Fishers were therefore excluded from the questionnaire process after the pilot study. Visitors were not seen as appropriate for interview due to the transient nature of their residency after this questionnaire process. Governance was not included in the questionnaire process as this was determined to be a group that would more benefit the research using interview techniques. Early feedback from governance candidates supported this notion. The structural design of the questionnaire used in this research for all groupings was composed of four sections (see Appendix A), labelled A to D. Section A reflects the self-identity of the responder in terms of type of resident or visitor, and if a resident, how long they have been a resident in the community. Section B was a closed Likert style matrix to examine the perceptions of the respondent across the range of broad issues based on the themes described earlier. Section C, which was customised according to the group being sampled, was an open response type section allowing the respondent to elaborate and expand on thematic questions. This appeared to be a successful strategy in opening up the qualitative discussion for opinion and perception from the responses collected. The final section, D, was designed to collect demographic data.

Businesses were also selected for questionnaire sampling as they have a unique insight into the local economy and employment issues. The adoption of businesses was driven by the need to identify issues and pathways of change in the local economy. These may be opposed to, or augment fishing activities, through business investment in the community and the use of fishing heritage in marketing and promoting the business as well as local employment considerations. Fishing is,

of course, a business, but excluded from that group as previously discussed, due to its historic significance.

A community residential grouping was selected in order to gain insight into the perceptions of residents and the critical issues that impact their lives e.g. social memory, community 'lock-in', identity and other notions of resilience and vulnerability that can be identified through a questionnaire process.

Visitors were also sampled. Questionnaire customisation was focussed on an external view of the community, such as visual perceptions of fishing activity and broad based opinions, as a visitor and tourist. This yielded some interesting observations e.g. one visitor wanted the fishing gear moved off the harbour walls as it was 'spoiling the view' in the active fishing port of Mevagissey.

Notions of 'community' can be additionally explored through the engagement of part-time case community residents and visitors alike. Residents may interact in socio-economic terms within neighbouring communities (e.g. have jobs as an economic activity outside their own geographically bounded community). Thus, in some cases (as has persisted for centuries), economic (and social) activity can 'extend' across several communities (e.g. Mousehole, Newlyn and Penzance) thus influencing notions of community which might be linked to the physical geographical delimitation of communities as a boundary ([Delanty, 2003](#)). The concept of geographically bounded communities is adopted as a base methodology for questionnaires and interviews in this research and the notion of 'communities' becomes important (also see Section 2.5). Notions of a 'wider community' ([Putnam, 2000](#)) in other contexts (e.g. social network 'bridging' to other physical communities) can build on other community views (e.g. cultural crossovers, fisher networks, social/family ties). This notion of wider communities serves to further complement,

describe and evaluate community resilience dynamics and to address questions of scale and inter-relationships in community resilience terms ([Bruhn, 2011](#)).

Perceptions of community can also be seen through the lens of tourists and other types of visitor. There is a wide spectrum of 'types' of resident from permanent to part-time and moving along a hypothetical 'residential' spectrum to very short term day visitors or of even less duration ([Barrett, 2015](#); [Delanty, 2003](#)). Second home owners may have perhaps the largest residential 'temporal range' of residential duration whilst day visitors perhaps the shortest. Some residents seek economic livelihoods outside their immediate geographically bounded community which both informs and confounds socio-economical analyses at the community level (discussed further in Chapters 7 and 8). Thus the benefits of capturing the perceptions of the complete spectrum of residential 'types' informs opinions of community, and especially existential views of 'fishing communities' through multiple lenses of the imaginary, 'marketed' and observed ([Brookfield, 2005](#); [Hall-Arber, 2003](#); [Ross, 2013](#); [Ross, 2015](#)). A further benefit of engaging visitor perceptions is that of building further reflection and cross-validation of emergent community issues (such as the aforementioned harbour wall usage for fishing equipment which may look unsightly to tourists but are an essential part of a working fishing village). The drawbacks of adopting this wider 'typology' of temporary and permanent residents, is that of the extent of fieldwork required to capture the 'full' picture. This factor influenced and constrained the representative sampling strategy adopted which included visitors but did not differentiate between other types of 'part-time' resident.

The individual lens that an observer adopts throughout this conceptual spectrum of 'types' of residents also provides further opportunities to inform and validate the researcher positionality and reflexivity (see Section 3.6) as well as

conveying visitors perceptions of 'community'. Visitor perspectives are further examined and assessed in the analyses chapters (Chapters 6, 7 and 8).

Data referencing in this research

References in this thesis to interview and questionnaire data in this research are based on a reference system (see Ref. Code column in Table 3-4). To illustrate, a citation reference to ([MBQ-002](#)) denotes the ([M](#))ousehole community, ([B](#))usiness group and ([Q](#))uestionnaire sampling, sample reference number [002](#). This reference system was also utilised in this research within NVivo™ and SPSS™ databases for analysis and reference.

Collection

Data collection adopted a disproportionate strategy. This means that not all groups were sampled using the same sampling frequencies ([Flowerdew & Martin, 2005](#); [Richards, 2007](#)). Table 3-4 shows the questionnaire collection data.

Questionnaire group	Mousehole (41% sampling rate of dwellings)					
	Ref. Code	Returns	% Total	Non-returns	% Total	Total
(B)usiness	MBQ	5	100%	0	0%	5
(R)esidents	MRQ	42	21%	155	79%	197
(V)isitors	MVQ	5	100%	0	0%	5
Totals		52	25%	155	75%	207
	Polperro (40% sampling rate of dwellings)					
(B)usiness	PBQ	0	0%	21	100%	21
(R)esidents	PRQ	13	6%	217	94%	230
(V)isitors	PVQ	6	100%	0	0%	6
Totals		19	7%	238	93%	257
	Mevagissey (37% sampling rate of dwellings)					
(B)usiness	VBQ	8	32%	17	68%	25
(R)esidents	VRQ	57	16%	307	84%	364
(V)isitors	VVQ	1	100%	0	0%	1
Totals		66	17%	324	83%	390
	Totals for all communities					
(B)usiness		13	25%	38	75%	51
(R)esidents		112	14%	679	86%	791
(V)isitors		12	100%	0	0%	12
Totals		137	16%	717	84%	854

Table 3-4 : Questionnaire collection data – Source : ([Author](#))

Using multiple groups in a questionnaire can be problematic and care was taken not to overlap data where at all possible i.e. a fisher may also be head of a household and run a business in town on a part-time basis ([Richards, 2007](#)). Local knowledge generated through engaging people directly helped to reduce this duplication of data and the author believes that any overlaps between interview and questionnaire data are mainly understood and accounted for by the small scale and limited geography of the community sampling. Recruitment sampling strategies for questionnaires are discussed in each of the following sections referencing Table 3-4.

Business Questionnaires

Businesses were concentrated in all the case communities predominantly within the harbour areas. This might be expected due to the historic evolution of the communities from their fishing past and an increasing need to service tourists. Business owners were determined as those who manage the business on a day-to-day basis and businesses were approached in normal business hours.

The strategy for business questionnaire delivery was the same for all the community studies. A visit was made to the establishment engaging the owner (either then or later) to agree to participate in the questionnaire. The author sensed that seasonality and the need for many businesses to concentrate on their core business prevented full engagement with businesses, especially in Polperro, during the peak summer season. This is reflected in the questionnaire return rate for Polperro in Table 3-4, further discussed in Chapter 6.

Residential questionnaires

Using the zones described earlier, a sampling strategy was developed based on these areas. A target sampling coverage of 40% was adopted, roughly divided across areas using the numbers of residences derived from the census data.

The residential sampling method was that of knocking on residential doors and conducting the questionnaire either on the doorstep or, if invited, inside. Alternatively, the questionnaire was left with the resident to be picked up later or dropped into the letter box, to be returned to a 'drop-box' located within the community Post Office in the case of Mousehole and Polperro whose Postal Managers agreed to host 'drop-boxes'. The Mevagissey Post Office could not

provide this service; therefore, the use of stamped addressed envelopes was adopted for Mevagissey. Alternative return options were always available to residents who could not complete questionnaires at the time.

Self-selection was a factor for those who responded on their doorsteps, with many people electing not to do the questionnaire at all. Others said they would do it later and arrange for collection, and others simply never responded after discussions on the doorstep. The process itself does permit a degree of self-selection. People may elect to do the questionnaire, or not. No residents approached the researcher asking specifically to complete a questionnaire.

The selection criteria at the residential level was not designed to capture head of household data, it is specifically designed to capture respondents notions of their communities and not to reflect their position in the home or family. Other factors included the absence of residents from their second homes¹². Some questionnaires were received by post from Mevagissey up to a year after the fieldwork was completed indicating that it was likely that that some of these second home owners responded. Holiday homes were generally conspicuous with window stickers and other advertising, these were not sampled.

Visitor Questionnaires

Questionnaires for tourists/visitors were undertaken on the harbour quaysides for all the fishing communities being researched. This met with little success (in numbers) as a questionnaire might take upwards of an hour to complete. This illustrates the effort taken by those who completed the document.

¹² It was not possible to easily differentiate second homes from permanent residential homes.

Analysis

A sample resident questionnaire can be seen in Appendix A. Analysis of the quantitative elements of the questionnaire (Likert based) was undertaken using the statistical software package, SPSS[™], whilst analysis of the qualitative data (open questions) was undertaken thematically in line with interview analytical methods using nVivo[™].

Questionnaire returns met with varying degrees of success as outlined in Table 3-4. 14% was collected from Mousehole, 5% from Polperro and 12% from Mevagissey with an average of 12% collected across all three communities. The Polperro rate of questionnaire return was particularly low at 5%. A factor in this may have been a recent saturation of other sociological research¹³ in the Polperro area disinclining residents from completing returns. Questionnaires proved problematic in Polperro in the Carey Park area where, significantly, zero returns were made and some hostility towards the interviewer was expressed. The implications of non-responses by residents are that it a) reduces sample size and increases error. Possibly and more seriously, is b) that non-responses can be selective and groups, or elements of this group may become over or under-estimated in this group and thus bias is introduced ([Dixon, 1965](#); [Ferber, 1966](#)). This effect can be minimised by good design and appropriate separation of groupings. However, this may be evident after the fact, and pilot studies may assist in this process to identify beneficial levels of sampling separation ([Coughlan, Cronin & Ryan, 2009](#)).

¹³ Personal comments from several residents in Polperro.

3.4.4 Interviews

Interviews can take place in a variety of ways from personal engagement, telephone, Skype™ or other multi-media electronic engagement. The format selected reflects the information collection strategy that the interviewer wishes to pursue ([Richards, 2007](#)). Options for interviews included structured interviews, open discussion based interviews and semi-structured interviews. Semi-structured interviews have several key features. They are scheduled in advance at a specific point, normally outside normal everyday events and are organised around a pre-determined framework of questioning ([Flowerdew & Martin, 2005](#)). There is also an expectation that further questions will emerge from dialogue. An interview session normally lasts from thirty minutes to several hours ([Whiting, 2008](#)). This was evident in this research, where the minimum duration was forty minutes and the maximum was five hours. This is in direct comparison to structured interviews, which follow a strict and inflexible format and exist in a 'closed' context, often associated with large volumes of longitudinal data collection.

At the other end of the interview method 'spectrum' is the use of unstructured, or 'open' techniques, where the interviewee is prompted initially on a topic and then the interviewer follows the thought development of the interviewee with minimal interference ([Denscombe, 1998](#)). Semi-structured interviews are typified in having a clear set of issues to be addressed and questions. However, the interviewer has the freedom to change the question order, to omit or add questions as appropriate and to develop ideas with the interviewee in a collaborative, relatively open ended and directed manner. Thus, the management of the interview process lies more with the interviewer in semi-structured interviews ([Whiting, 2008](#)). A useful interview

strategy is to prepare an interview guide to frame the approach ([Flowerdew & Martin, 2005](#)) and to record progress as the interview unfolds, which may or may not be shared with the interviewee ([FAO, 2012b](#)).

Semi-structured interviews were chosen as the interview method in this research and interview guides were adopted in this research (see Appendix B).

Semi-structured interviews were undertaken using a moderately open framework to facilitate a focused but conversational, two-way communication to both to give and receive information, a 'conversation with a purpose'. Interviews started with general questions within themes, relevant themes for discussion were initially identified and the possible relationship between these themes became the basis for more specific questions ([FAO, 2012b](#)), which were part of the 'creative process' for this interview style (see Appendix B). Associated questions to the guide framework are identified during the interview process. The interview is then steered towards these questions for deeper discussion and it is an evolutionary, creative, flexible and adaptive process. The semi-structured interview is essentially the vehicle that the interviewer 'steers' to facilitate the interview ([FAO, 2012b](#); [Leech, 2002](#); [Whiting, 2008](#)).

Interview Design

The types of questions highlighted in the aims of this research (see Chapter 1) demanded in-depth discovery as well as a broader based investigation to understand general trends and to promote triangulation. The most appropriate qualitative interviewing technique in this research was considered to be semi-structured interviewing. A more structured interview approach would not have allowed deeper

examination of emergent cultural and social questions. This was a 'journey of discovery' with few extant and a priori perceptions of social reality ([Flowerdew & Martin, 2005](#)).

In this study, capital themes in the design of the semi-structured interview guides were utilised derived from the aims discussed in Chapter 1. The purpose was to provide initial categories to assist in the focussing of questions and analytical approaches in this research. The guide frames questions within sets of social, natural and economic topics. The purpose of this was to reflect capitals as critical in the expression of community social resilience ([Wilson, 2012a](#)).

Reflexivity is discussed in depth in Section 3.6. However, mention should be made of the need in the interview process to be aware of extant, unconscious or introduced biases by all participants. Thoughtfulness and attempts to minimise this by appropriate measures were active processes in the interviewers approach, and personal reflection on the methods and analysis also informed the study limitations ([Whiting, 2008](#)).

The design of semi-structured interview was crucial in guiding both the interviewer and the interviewee as a 'roadmap' of the interview process. A major benefit of semi-structured interviews was that interviewees had an opportunity to elaborate on themes and provide deep and informed data whilst the interviewer could link themes and questioning dynamically during the interview.

The sample groups (see Table 3-5) adopted for community interviews are discussed in the following section.

Interview Groups
1. Fishers and fishing industry
2. Business
3. Residents
4. Governance

Table 3-5 : Interview Groups – Source : [\(Author\)](#)

1. Active and retired fishers were selected for interview. Fishers were (and are) important in the practice and history of fishing and actors critical in its role in resilience building and degradation.
2. Businesses were selected for interviews to understand the economic drivers and patterns apparent in the economic cycle and their views on the business position of the community. Business drivers are critical in evaluating social resilience from the research question that fishing communities are better able to cope with shock if they are ‘honeypot’ communities. Business views on the use of fishing heritage is also critical to the research.
3. Community residents were selected in order to gain deeper insight into the perceptions of residents and critical issues that impact their lives e.g. social memory, community ‘lock-in’ and other critical aspects of resilience and vulnerability.
4. Governance related actors were selected e.g. MPs, Harbour Masters, County Councillors and Parish Councillors to gain an insight into formal political, power and policy formation. Governance is closely coupled to the assessment of agency and engagement that communities express within and outside formal governance.

It was prudent to identify key groups within these fishing communities as a pre-cursor to selecting individuals for interviewing or alternate observation methods ([Richards, 2007](#)). Experience in the field suggested that it was not always easy to recruit people for interview (especially in Polperro) and opportunistic approaches were often useful.

Each case study was assigned a different number of group based interviews depending on the relative perceived dependence of the community to fishing operations or cultural fishing heritage respectively, as previously discussed. This is a purposively designed, disproportionate, technique ([Flowerdew & Martin, 2005, p.97](#)). Hence, a community that is more evidently dependent on fishing activities will have proportionately greater interviews for those actively engaged in fishing as opposed to fishing cultural heritage, and vice-versa with those communities more engaged in building resilience (or not) through fishing heritage. This reflects the discussion of the community spectrum (see Fig. 3-2).

Table 3-6 indicates both target and actual interview frequencies. Practically, some interviewees were only available [at](#) certain times within the timeframes of this study, so flexibility was important in this strategy.

Interview group	(M)ousehole			(P)olperro			Me(v)agissey			(W)ider Area			Totals	
	Ref. Code	Target	Actual	Ref. Code	Target	Actual	Ref. Code	Target	Actual	Ref. Code	Target	Actual	Target	Actual
(F)ishers and fishing industry	MFI	4	5	PFI	8	4	VFI	12	4	WFI	2	2	26	15
(B)usiness	MBI	2	2	PBI	4	1	VBI	4	1	WBI	0	0	10	4
(R)esidents	MRI	3	5	PRI	4	2	VRi	4	2	WRI	0	0	11	9
(G)overnance	MGI	1	1	PGI	2	2	VGI	2	2	WGI	4	4	9	9
Totals		10	13		18	9		22	9		6	6	56	37
% target complete		130%			50%			41%			100%		66%	

Table 3-6 : Interview collection groupings and recruitment – Source : ([Author](#))

In reality, the recruitment process took place dynamically across the groups, reflecting the reality of both people's time and the authors need to take opportunities when they arose. The aspirational sampling numbers for interviews was determined by projecting the number of interviews feasible for the timeframes with consideration for time needed for the other research methods utilised. A total of twenty-six interviews were planned geared to the amount of (initially) perceived commercial fishing activity in the communities, i.e. Mousehole has perceptively less fishing, so fewer fishers were targeted and relatively more non-fishers. In actuality, fifteen fishing interviews were undertaken in total. The strategy was to increase the number of interviews as each community study was undertaken, as learning took place by the interviewer and efficiencies improved over time. The distribution was uneven in places reflecting variable access to interviewees. This reflects the deliberate disproportionate approach invoked in the type of case study adopted and discussed in Section 3.3. In Mousehole, the interview numbers exceeded those planned whilst in Mevagissey and Polperro they were around half or less than planned. Reasons for this were complex and involved business seasonality and recent exposure to researchers.

Interview Approach

The interview sessions were planned carefully and advance agreement obtained for the use of audio recording from the interviewee where appropriate. Data protection issues were disclosed and a consent form signed off for interviewing and audio recording (where applicable). If audio recording agreement was not gained, the interview took place on a note-taking basis only. If consent was obtained, the

session was audio recorded (preferable option) and transcription/coding followed a standard strategy ([Saldaña, 2009](#)). The interviews were conducted in a private place or a quiet public place, but always with the express consent of the interviewee ([Denscombe, 1998](#); [Flowerdew & Martin, 2005](#)). The interview respondents were individuals identified to match the needs of the sampling strategy. Respondents were selected from four groupings of the community across the schedule discussed earlier (see Table 3-6) for a total of thirty-seven interviews across the three fishing communities and six wider area interviews, including two MPs and two County Council Councillors. These interviews were undertaken to create a wider perspective.

Interviews were also undertaken with the fishing spokesperson of Greenpeace both on-board the 'Arctic Sunrise' moored in Fowey and via a transcribed telephone interview. This provided another perspective to an NGO view of environmental politics and the challenges to local fishers. The author also undertook personal research in Newfoundland, including an interview with CNBC¹⁴. This also informed wider research through fishing community resilience from a Canadian perspective.

Ethical formalities, such as explaining the reason for the research were observed and the rights of the informant were respected. The interviews were conducted using the interview guides in a non-judgmental manner. Ethics clearance was secured with the Plymouth University Ethics Committee.

Field notes and audio (with consent) were recorded with appropriate courtesies and ethical considerations ([Delyser, 2009](#); [Flowerdew & Martin, 2005](#)). Other techniques were example questions and prompts using the interview guide.

¹⁴ CNBC – Canadian National Broadcasting Company, interviewed David Quinton, presenter of 'Land and Sea' in St Johns, Newfoundland 2014.

Tailoring the wording but retaining the context of the question was appropriate for some respondents. Weaknesses in the use of semi-structured interviews included aspects of reflexivity such as how the respondent perceived the interviewer along with notions of agenda. These were handled through neutrality and the maintenance of 'emotional distance' ([Denscombe, 1998](#)). Issues of unconscious bias were considered before, after and during public engagements ([Castree, 2015](#)).

Issues of self-selection were considered early in the identification of interview candidates ([Jolley & Mitchell, 2007](#)). No interviewees purposively sought an interview in this research. Candidate backgrounds were assessed to determine the appropriate interview group they might logically fall into (see Table 3-6) and these candidates were approached for interview. Care was also taken in engaging with those who were less inclined to be interviewed (e.g. some retired professionals encountered), although some were selected through extant roles e.g. Harbour Master. Interviewee candidacy was framed in the broad criteria set out in Table 3-6. The deliberate socialisation of the research made anonymous introductions increasing difficult, especially in Mousehole, however the researcher was mindful of this in recruiting candidates.

The real-life interview engagement process in this research was to set up an 'interview base' somewhere in each community (a net loft in Mousehole, a village hall meeting room in Polperro (as well as the researcher's boat) and the library in the social club in Mevagissey). When arranging interviews, this was the 'fall-back' position if other venues could not be resolved (e.g. residential house, business premises, quiet area of pubs, the beach, quayside, café and so on). This worked well in practice and allowed an element of security options for participants and researcher

alike¹⁵. Some interview candidates were naturally reticent about intrusions into their private lives, and the researcher respected this completely.

The author was also very privileged to go out on four different day and night fishing trips on commercial fishing boats after invitations from skippers. One example was that of a trip netting off Mousehole with Andy Wheeler (CuC business research partner, foreground) from the CFPO and Richard ('Gus') Caslake from SeaFish, both closely connected to the Mousehole community and pictured in Fig. 3-9 with some fine Cornish Pollack being liberated from the nets.



Figure 3-9 : Netting off Mousehole - Source : ([Author](#))

¹⁵ The author is grateful to the management teams of each of the community venues outlined for their kindness in providing the facilities for research use at no cost.

Analysis

As aforementioned, a set of semi-structured interview guides was created to provide a 'roadmap' of thematically based questions to be raised (see Appendix B), along with an identified method of taking notes and fundamental coding strategies. Qualitative analysis was thematic with selected audio recordings later transcribed. The initial setting of firm categorisation and coding for qualitative data was avoided to allow the field data to fully express coding elements ([Flowerdew & Martin, 2005](#)), followed by iterative and detailed coding. These data gradually evolved into data categories and were further scrutinised as to their individual and collective contribution to the notion of social resilience within and across these communities.

Resilience themes and community types were also informed through secondary sources such as FAO guidelines for studying small fishing communities ([FAO, 2012a](#)), Nadia Marshall's work on Australia's Barrier Reef fishing communities ([Marshall, 2007a](#)), pan-European data from the LEDDRA European Community project ([LEDDRA, 2012](#)) and the CHARM coastal communities project ([Acott, 2011](#)).

Coded data generated by the semi-structured interviews were subjected to content analysis. A qualitative inductive and deductive technique was adopted with the purpose of both increasing internal validation and triangulation ([Delyser, 2009](#)). Semi-structured interviews were recorded digitally and then transcribed and coded using nVivo[™] software. The coding structure was composed of resilience themes as categories, (and in due course, the creation of sub-categories) and the coding elements themselves ([Saldaña, 2009](#)). Basic demographic data was also captured (e.g. gender, community, occupation, time lived in community, interview place, duration and method).

3.4.5 Participant observational methods

A core aspect of this research was the use of observational methods in tandem with the other mixed methods described. As the author was embedded in each community for around three months, this provided a unique platform to observe the community in all respects ([Yang, 2015](#)). This ethnographic theory informed the research and further helped to triangulate the benefits of mixed methods utility. Ethnographic participant observation involves a researcher participating in a community and developing relationships with people who can provide perspective and opinion on community issues. Ethnography is a suitable technique to describe how a cultural group works and to explore their beliefs, language, behaviours, power and politics ([Creswell, 2007](#); [Creswell, 2008](#)).

Community recording options include field notes, photography, video, audio, painting, drawings, sculpture and other methods creating artefacts for later recall ([Flowerdew & Martin, 2005](#)). Issues arising from participant observation include gaining access to a community, the type of role that the researcher adopts and his or her reflexivity (e.g. playing a role other than a researcher while researching) and the kind of data intended for collection. Observations can be usefully 'mixed up' with other methods (e.g. visual methodologies covered in the next section).

Use of participant observation methods in this study

The type of observational methods used in this research included the creation of social network 'maps' for community residents, participating in social events, talking about local issues with residents and recording community activity with notes,

photography and video recording. This was combined with visual methods e.g. signage, imagery and other forms of iconography considered in the next section.

The researcher found the best way of becoming known within communities was to frequent the 'social hubs' e.g. pubs, harbour walls and cafes in fishing communities. The researcher attended many events in Mousehole, such as the lifting of the baulks (wooden harbour protection beams) which celebrates the opening of the harbour as well as wedding and other social evenings at the British Legion. The 'Legion' was a rich area for hearing and understanding local issues spanning the community of Mousehole and beyond. The village was still very active in winter and has a thriving primary school, although most of the children are 'bussed in' from surrounding areas and are not from Mousehole, which has an elderly demographic. The primary school (and the social hub it also provides), was saved from loss by the concerted actions of residents and educational champions ([Caudle, 2015](#)).

Polperro provided a very different scenario for the researcher. The community visit took place in May, June and July which is the peak business period for the village, and businesses were focussed on doing business while the opportunity presented itself. The social hubs in Polperro are composed of the Blue Peter and the Three Pilchards pubs, the declining British Legion social club and the little used village hall.

Mevagissey is a very active and bustling village, and the harbour front has significant fishing activity presence all day and most of the night. The social hub of Mevagissey is undoubtedly the Mevagissey Social Club (MSC). This club was created as part of a social co-operative initiative at the same time as the local fishers formed the now defunct fishing co-operative.

Design

Social centres and the harbour frontal areas provide the richest opportunities for engaging with fishers and other members of the community, including visitors. The research strategy for participant observation was to 'self-position' into these locations and then to build relationships with people by engagement. The author used a completely open and forward strategy to the research with no covert techniques ([Flowerdew & Martin, 2005](#)). Fishing communities can express suspicion of incomers and the author made sure that this did not become an issue. Trust is a given not a taken and extensive effort was made to make sure that the community understood who the researcher was and exactly the purpose of his being there in a completely transparent manner.

Observation

Other sources of rich data included addressing parish councils and the important process of getting the goodwill of the Harbour Masters. The Harbour Master is a critical community role and is often an important 'sensory organ' in understanding a fishing community's cultural traits ([Romers, 2012](#)). The Harbour Office was the first researcher point of call for all the case communities.

Observation mechanisms included ad-hoc audio, video and still picture recording (with permission where appropriate) and extensive notation as well as building up 'social maps' of the member networks of a community encountered along with their roles and relationships. This was particularly interesting with respect to the

older family names in fishing communities and how they still exert influence, and indeed the nature of conflict with incoming new community members. The author undertook both overt observation and overt participation depending on the context of the situation and did not undertake covert approaches ([Flowerdew & Martin, 2005](#)). Communities are all about people and the deliberate policy of overtness, in the opinion of the researcher, was the 'natural' and appropriate choice in these socially orientated and friendly communities.

3.4.6 Visual and observational methodologies

Overview

Fishing heritage is encapsulated in the 'feel' or 'spirit' of a fishing community. Part of this 'feel' is the visual perception of a fishing village such as visual evidence of fishing, e.g. nets, fishing vessels, pots and fish stalls. Aspects of fishing heritage may be more subtle, or even contrived, such as the name of a pub e.g. 'The Lobster Pot', The Fisherman's Mission, architecture, local cultural events, road names, decorations, souvenirs and postcards, information boards, menus, art galleries focusing on fishing, or even a fishing museum as a reference to a sense of place and heritage ([Acott, 2011](#)). Many of these entities have a visual presence and may be iconic in their own right, all contributing to the cultural identity of a fishing community. In order that this research might examine the visual presence of fishing culture, visual methodologies were utilised using both qualitative and quantitative techniques across the case study communities. Visual methodologies used in this research were composed of photo-documentation and analysis through basic semiology (the

interpretive study of signs) and observing how artefacts reflect community heritage and aspirations ([Rose, 2011](#)). Thus, a visual narrative can help to inform the observer of the trends and cultural essence of a community, and indeed, aspects of community 'branding' which also serve to describe the cultural heritage narrative as well as create new notions of identity. The miasma of imagery in a fishing community may inform the observer about the community's past, present and perhaps its future in some regards as the way in which a community serves to 'shape' itself.

Design

The technique adopted in this research was to photographically record the signage, restaurant menus, postcards and other visual expressions of fishing heritage and fishing activity. This was undertaken using both still and video methods e.g. the social activities around re-launching fishing boats at the start of the new fishing season out of Mousehole when the baulks were lifted in Easter 2013 (see Chapter 5).

Collection

Photographic collection took place of all relevant signage, restaurant menus and postcards displayed within each community. Collection took place using a digital camera and was indexed on community and context. Video documentation was undertaken (where possible) of community events and opportune moments when the researcher was in the right 'time and place' by either design or by chance.

Analysis

Image analysis was undertaken through several types of qualitative and quantitative methods ([Flowerdew & Martin, 2005](#)). Analysis was undertaken on the collection of photographs and other artefacts such as postcards, menus and signs described earlier.

An example of semiology might be a picture of an historical fishing boat in sepia shading which suggests the fishing heritage of a community and faded old photos, a picture of a powerful speedboat might suggest modernity and technology in a harbour indicating a contemporary context.

Of real interest using this method was how or, indeed, if, a community may be 're-inventing' itself and possibly providing evidence of aspects of fishing heritage being used to promote or even change a community identity trajectory. Using this technique in combination with interviews helped identify how business 'branding' and re-invention was happening in a community, especially with a view to interpreting a community's business and 'projected' identity trajectory.

3.4.7 Secondary sources

Secondary sources adopted included an FOI request to Cornwall County Council, the internet, OGS, archives, museums and private collections of books made available during the research. Where possible, information sources were corroborated with other sources. Secondary data provides invaluable information for such trends as culture, physical geography and demographics both historically and in contemporary times. This may also provide important research linkages and new ways of informing the research. Secondary data can also provide context to the

research in question by comparative analysis that may be important in the three case communities and their social and economic trajectories and commonalities. A further consideration is that it supports a diverse and focused method to collecting and utilising artefacts from many different sources of knowledge ([Flowerdew & Martin, 2005](#)).

3.4.8 Alternate methods considered

Other methods that considered and not adopted include the following.

I. Focus groups

Focus groups were not utilised primarily because a) they require trained and preferably professional moderators, b) the difficulties in recruiting across communities and still allow participants to have a voice c) they are expensive options to do successfully ([Morgan, 1993](#)). The research was also intended to be non-interventionist and avoid introducing significant new community methods such as focus groups ([Lunt & Livingstone, 1996](#); [Nielsen, 1997](#)).

II. Participatory workshops

Feedback workshops were considered as a part of a feedback process to the communities after the fieldwork was completed and substantial work on the thesis had been completed. However, constraints of time to complete the thesis and finances made this a challenge.

3.4.9 Community Resilience and Vulnerability Index (CRVI)

As outlined in Section 2.6, the novel Community Resilience and Vulnerability Index (CRVI) is utilised to assess status-based resilience and vulnerability in this research.

The framing of resilience is viewed by some academics as being complementary to sustainability ([Rees, 2010](#)), providing a strategy (and especially a provision of options), to deal with unforeseen consequences through building or retaining adaptive capacity. The use of resilience is viewed as appropriate in being able to measure things that are not measured in wellbeing or sustainability measures. This notion is examined in more depth later in this research. This notion is fundamental to the CRVI in this study, which provides a status, or snapshot, of the qualitative resilience indicators in the case study communities. These indicators may support or undermine the resilience of these communities through the processes of absorption, adaptation, and tipping points driving transformation¹⁶. Thus, one contribution that this research makes is utilising qualitative resilience indicators in the CRVI to highlight the nature of communities as a ‘negotiated condition’, and not as remotely perceived ‘hard metric’ ‘facts’ which are often viewed as outcomes in their own right ([Scerri & James, 2010](#)).

Resilience can be viewed as a ‘means’ and not an ‘end’ in broad terms (in a sustainability context) ([Béné, Frankenberger & Nelson, 2015](#); [Béné et al., 2012](#)). This is instrumental in both the design and interpretation of the CRVI in this research. This CRVI forms a novel view of resilience and vulnerability status in line

¹⁶ An additional approach to this index might be to include reference to general trajectories for these indicators in these communities; these would be dependent on additional longitudinal type studies. This would support the identification of the real impact of slow change on communities.

with notions of resilience through a set of ‘intermediate’¹⁷ outcome indicators composing an array or combination of multiple capacities ([Béné, Frankenberger & Nelson, 2015](#)).

This understanding of resilience as a means rather than an end is increasingly acknowledged in the literature as discussed earlier. As such, this means that e.g. development programmes cannot have resilience as a primary outcome objective with this premise ([Béné, Frankenberger & Nelson, 2015](#); [Béné et al., 2014](#); [Brown, 2014](#); [OECD, 2013](#)). General notions of wellbeing and sustainability are considered to be more aligned with primary objective outcomes relative to those of resilience. Resilience, in this research, is framed within status based and multiple adaptive capacities across multiple scales and, critically, their subsequent ability to deal with shocks and stressors.

Importantly, it is the ‘buffer’, or capacity of the community in respect of absorption and adaption that promotes resilience and its polar extreme, vulnerability. Also, of critical importance is the notion of the interaction and inter-dependencies of ‘multiple adaptive capacities’ ([Béné, Frankenberger & Nelson, 2015](#)).

Thus, the indicators adopted in the CRVI need to express how communities have coped with change to a current state-based view and how resilient they appear as a consequence of this, and at this point in time. These state views are assessed by observation both within and relatively between the case communities. The CRVI provides this status view of resilience (loosely framed in capitals) premised on the resilience notions of absorption, adaptation, and transformation through mixed method validation approaches. This differs from a sustainability approach that might observe communities through an (arguably) ‘solution’ orientated lens such as

¹⁷ i.e. not ‘hard’ or ‘end point’ outcomes.

performance metrics and rapid-feedback indicators ([Innes & Booher, 2000](#)). The resilience and vulnerability factors that have been determined from the field work will be 'classified' in terms of their current state as being resilient, partially resilient or vulnerable (red, amber and green respectively, also see Table 8-5). This is a state or 'snapshot' view of resilience driven by responses to stressors leading to desirable or undesirable outcomes depending on the positionality of the response 'recipient'.

The CRVI does not attempt to provide a grand 'solution' view, rather it serves to describe the inferred community resilience and vulnerability of the intermediate factors directly connected, underpinned and supported by a rich narrative rather than an immediate static quantitative assessment. The CRVI is thus an objective 'community orientated' resilience index by design that stays close to the 'richer' and contextual issues of a coastal community rather than being a tool specifically designed for analysis of all community types (e.g. urban). The notion of whether resilience is a useful quality to measure is a vexed one and a perennial issue in the academic literature ([Béné et al., 2014](#); [Berkes & Ross, 2016](#); [Cosco et al., 2016](#); [Wilson et al., 2016](#)). Absolute values of wellbeing in quantitative terms are wrongly associated with the 'measurement' of resilience. What is important in measuring resilience is the relative change (or stasis) in these indicators in the presence of shocks. Longitudinal methods can benefit the measurement of resilience in the assessment of change through repeated sampling from a) multiple scales and b) state sampling at appropriate frequencies ([Béné, Frankenberg & Nelson, 2015](#)). The CRVI does not provide a longitudinal resilience view, what it does provide is an ex-ante¹⁸ state assessment ([Béné, Frankenberg & Nelson, 2015](#)) of indicators categorised loosely within capitals and comparable across the case study

¹⁸ The initial state of single or multiple capacities.

communities. However, the CRVI is also contextually supported by proxy and secondary data providing 'proxy longitudinal' views as a hybrid between longitudinal and status based analyses. Underpinning these indicators are the 'disturbance components' which are the shock and stress factors that drive community change to describe the resilience classification state of a particular resilience factor within a particular community. This assessment of 'ex-ante' and 'disturbance' components is in line with resilience frameworks such as those used by the FAO in interventions ([Béné, Frankenberger & Nelson, 2015](#); [Constas, Frankenberger & Hoddinott, 2014](#)). The 'ex-post' component of the FAO component is assessed through longitudinal multiple state sampling strategies. This strategy is not within the scope of this research but of critical importance in resilience research design.

This operational CRVI typology (including its indicator classification and thresholds) is examined with more rigour in Chapter 8.

3.5 Research limitations

Beyond conceptual issues linked to the research framework later discussed in Chapter 9, some methodological research limitations in this study briefly require acknowledgement.

First, the low response rates for questionnaires in Polperro at 7% (see Table 3-4) may have been a result of 'questionnaire fatigue' from other research initiatives. While targets for interviews were progressively increased for each community to raise respondent numbers, similar numbers of interviews were actually obtained across the three communities. This may have been due to Polperro and Mevagissey fieldwork taking place in the busy summer season. However, as Section 3.4.2 highlighted, the multi-method approach adopted in this study and the fact that good

triangulation of results was possible based on different types of methods adopted, nonetheless ensured robust data collection for in-depth analysis of resilience indicators.

Second, community fieldwork took place in winter, spring and summer sequentially, a problem of research timing common to many PhD studies. Ideally, all communities should have been assessed simultaneously, but this proved logistically challenging. It is, however, not believed that this greatly affected the overall research results as repeat return visits to the communities and crosschecking of information enabled some homogeneity in data collection (see Chapter 3).

Third, questionnaire sample sizes were limited to around 40% of residents in each community. While this is more than enough to be deemed 'representative' ([Flowerdew & Martin, 2005](#)), the small size of the communities under investigation would have made it possible to sample 100% of the population, which would have given full sampling coverage. Future studies addressing similar questions could, given more time and researcher resources, extend the scope of a study like this one and could provide more complete information relating to the whole population of a given community.

3.6 Reflexivity and positionality

The sole researcher in this research, born at the end of the 1950s, is a white, cisgender male of Welsh descent with an active interest in the sea and general maritime culture, especially that of traditional boats and marine sailing. My relevant academic interests are community resilience and sustainability. I was raised in a small rural village close to Stroud in the Cotswolds and become interested in the social ways of small rural communities from a very young age and was interested by

the disinterest in village life expressed by incomers as well as the negative reactions of villagers to these same people. I also had close family in the Rhondda Valleys of South Wales, and saw the impact on communities through the Miners Strikes of the 1980s and the tragic loss of community resilience as a consequence of ideological Thatcherite policies which continues to this day. My extant positionality and knowledge have inevitably been shaped by my experiences :

“Knowledge does not arrive unmediated; rather, knowledge gets approached by interaction between the questioner and the world.”

([Takacs, 2003, p.31](#))

My initial HE academic background started as an undergraduate in environmental sciences in the 1980s, studying conservation issues and especially environmental pollution (my dissertation was on acid rain impact). This was driven by my concern for the planets welfare through my readings of environmentalists Rachel Carson, Aldo Leopold, Theodore Roszak and deep ecology thought within the work of Norwegian philosopher, Arne Næss. This was followed by a PGCE from which I withdrew as I felt uncertain of my ability to become a secondary teacher and continue in that role. I then worked as a business process orientated project manager and consultant which drew me overseas to the USA and the Far East for eight years (under US H1B work visas) which permitted me several extended personal field trips (from one to three months) to India, the Philippines, Alaska, Florida and Maine amongst others often encompassing my interests in community life. During this period I re-evaluated my true aspirations, especially towards teaching and vowed to return to university when I returned to the UK, which I duly did. Thus I

undertook an MSc at Southampton University (National Oceanographic Centre) in Oceanography which rekindled my educational drive, this was followed by an MRes at the University of East Anglia in Climate Change which focussed me deeply on the human impact of anthropogenically rooted Climate Change, and with which I associated significantly. Hence, I then progressed onto a part-time MA in Environment, Policy and Society with the Open University (studying social and governance aspects of fishing in Cornwall). During my MA, I 'worked off' my debts from the previous attendances at universities as a consultant project manager in social resilience initiatives for flood prevention in Salford and Hull with the Environment Agency. I then progressed onto PhD resilience research and for which I was fortunate to gain funding. Hence, I believe I have arrived at a position where I have a tenure on my true aspirations, those of the how humans truly function as a society as a critically powerful, and self-adaptive part of the planetary environment, for 'good' and 'ill'. This is something I am carrying forward in this research, focussing on the drivers behind how humans think, adapt and cope at the community level and how resilience plays a part at the local level and through other scales. My future aspirations are to further explore the multiple dimensions of community resilience and sustainability as an academic through post-doc and lecturing roles.

My positionality in this research has been shaped through my early life in rural communities, my life experiences abroad in an employment capacity and through my field trips leading to first hand experiences of inequality and power imbalances linked to environmental issues, especially in communities. I believe my experiences in rural communities from my upbringing in Stroud and the Rhondda Valleys, international travel and academic activities has given me both a wide, and interlinked interdisciplinary perspective on the socio-economic issues in play in communities.

My positionality thus requires constant self-analysis in regard to my previous exposures in these environments and the empirically explanatory nature of this research as 'a posteriori' knowledge.

My 'operational' day to day positionality in the case community fieldwork was essentially in two 'modes', the first mode was that of professional researcher being objective, raising questions and very much an 'outsider' in the community. However, as I was accepted (warmly) into the communities as an embedded researcher, I became conscious of a transition towards an 'insider' perception of myself from the community. I was careful to separate the professional researcher from the person when I was involved in community social life, stating my role at times as researcher or 'person' at that time.

The social 'insider' role consequently informed the professional researcher 'outsider' role. I believe this allowed a good degree of objectivity and 'role' separation in the field. My personal inclinations in this fieldwork were skewed towards the disenfranchised aspects of communities through power configurations of self-interest and community 'lock in' on a longitudinal basis. I was also inclined to defend fishers against accusations of 'environmental vandalism', this is factually incorrect in the case of most fishers and indeed fishers are in the majority, environmentally conscious and proponents of habitat conservation and fish stock maintenance. Fishers also want to fish next year and their offspring to have fishing succession prospects.

Thus, my research positionality is informed by inequality and power imbalances and how communities address their own issues, often in spite of socio-economic power and political imbalances at many scales and the advent of globalisation. My positionality is also informed through my interest in embedded

cultural traits, which have often evolved for very good reasons and may be simply ignored by the often blunt instruments of policy and subsequently deemed as unimportant, and inevitably and often irretrievably, lost.

I continually reminded myself of the biases I hold during the research when writing up field notes for later use and to work with grounded truth as emergent data.

3.7 Ethical considerations

Ethical considerations were approved through the Plymouth University Ethics Committee. This research was undertaken in line with these agreed ethical protocols.

4 Changing livelihoods in Cornish fishing communities

4.1 Introduction

The overall aim of this thesis is to analyse how social resilience in Cornish fishing communities is influenced by change within social, political, economic and natural domains over long and short time scales.

The purpose of this chapter is to ‘paint the picture’ of change and transitions in fishing community livelihoods in Cornwall from the last century to the present. Longitudinal social, economic, political and natural processes and events are examined and linked to the formation of resilience pathways, ‘corridors’ and trajectories of community change and ‘lock-in’. This chapter spans the experiences of Cornwall in respect of social resilience factors e.g. the community impact of fishing decline. This decline is commonly acknowledged to have gained momentum around 1880 ([WBI-001](#)). It also observes a shifting economic movement from primary resource extraction towards a tourist heritage and agricultural economy. Socio-economic change through tourism can have both positive and negative aspects i.e. what appears to be a vulnerability to one segment of society is a benefit or potential resilience to another. Regional vulnerabilities generated through the socio-cultural impact of tourism can consist of a growth of ‘undesirable’ activities, culture as a commercial commodity and growth of hostility to tourists ([Crandall, 1994](#)).

Cornwall has long depended on fishing, mining, quarrying and agricultural livelihoods as a county and harbours a high degree of poverty, contrary to the tourist vista projected by the tourist industry ([Kennedy & Kingcome, 1998](#)). Key issues such as a lack of ‘value’ placed on socially framed community ‘assets’ e.g. social memory

and social networks in communities, are linked to a lack of apparent community benefit from multiple development programmes in the county. This is further discussed in Chapter 6. The event timescale in Fig. 4-1 outlines some of the key events in Cornwall since 1950. These events (and others), and their impacts, will be assessed to provide a background in framing resilience at the community level.

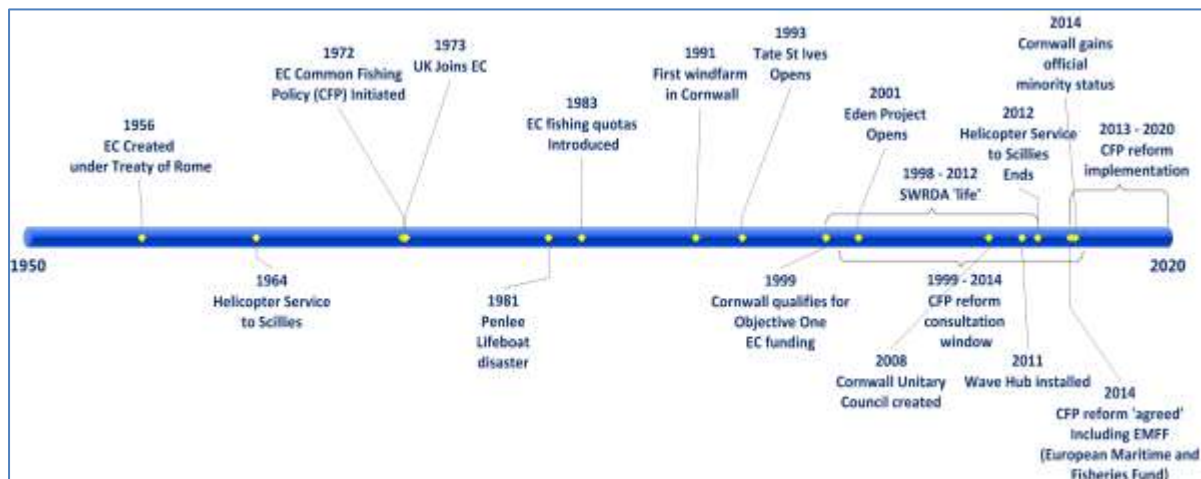


Figure 4-1 : Selected key events in Cornwall - Source : ([Author](#))

4.2 Cornish transitions and adaptation: from resource extraction to tourism

Cornwall has become an immensely popular tourist destination, with an estimated multi-day visitor annual number of 6 million, an annual day visitor volume of 9.8 million and 24.8 million annual ‘tourist nights’¹⁹ in accommodation. The county had an estimated tourism income of £1.6 billion from 2007 figures ([ThisIsCornwall, 2009](#)) increasing to £1.85 billion in 2011 ([WMN, 2011](#)). In Cornwall, around 22% of jobs are tourism related compared to around 12% in Devon ([ibid.](#)).

Mass tourism and ‘commoditised’ heritage now dominate Cornwall in the summer months and new residents are drawn to Cornwall by the natural capital of both land and sea. Cornwall, and its often ‘imagined’ people and culture are

¹⁹ Occupied beds overnight or equivalent e.g. tents, caravans.

represented in a multitude of ways from within and without. Journalists, film makers, tourism interests and a plethora of others participate in the creation of the post-modern identity of Cornwall ([Kennedy & Kingcome, 1998](#)). This research, therefore, will also explore the use of fiction or semi-fiction in creating an identity that many Cornish people may, or may not, self-identify with.

Cornwall (or Kernow in the Cornish vernacular) has a long, diverse and often confrontational history with the 'other' England that is to the East of the Tamar. Cornwall has a long history of mineral extraction, principally copper and tin, being the world's leading producer of copper in the 1840s ([CCC, 2014b](#)). Cornish miners became very much in demand and many left Cornwall taking their mining and engineering skills with them to Australasia, the Americas and South Africa, or left to seek land abroad in areas of less restricted land tenure patterns. In these times, fishing boats were still under sail and oar and the fishing community members worked together to land and process catches locally ([Martindale, 2012](#)). Community members in these fishing communities also adopted other livelihoods such as farming and market gardening, especially bulb flower cultivation (notably daffodils which now persist naturally) ([Buttery, 2012](#)).

The 20th century saw the primary resource extraction industries in slow decline. However, the advent of the railway connection to Penzance over the Tamar, and improved trunk roads allowed two important changes to occur. Firstly, the ability to export products easily out of Cornwall to different markets, and secondly a road and rail network provided a capacity to 'import' tourists along with a building boom in guest houses and hotels to support this influx ([CCC, 2014b](#)). However, the new infrastructure encouraged and accelerated second home ownership and the conversion of residential homes to holiday homes, signalling the onset of tourism

which had a particular focus on attractive, and so called ‘honeypot’²⁰ fishing villages such as Padstow, Mousehole and Sennen Cove ([Urry, 1992](#)). Remote ownership and residential conversion to holiday homes, linked to spiralling house prices aligned with some of the lowest wage levels in the UK, exacerbated the problem for society’s poor in Cornwall. Some coastal towns and villages have been described as ‘ghost-towns’ in the winter months created through multiple factors, and linked to a degradation of services and infrastructure, leading to so called ‘service deserts’ ([CCC, 2014b](#)). St Keverne, on the Lizard in Cornwall, has been active in the creation of neighbourhood plans to halt the impact of second homes and the creeping threat of becoming a ‘ghost town’ ([Smith, 2014](#)). St Ives has initiated a ban on second ‘new build’ homes to slow the communities ‘financial cleansing’ ([Guardian, 2016a](#)) and Fowey is considering similar options ([Guardian, 2016b](#)). Contrary opinions have been aired through research programmes suggesting that second homes can be beneficial for tourist communities ([Williams, 2016](#)) by providing employment. St. Austell has also been described as such a ‘ghost town’, with the majority of shops now closed, the blame falling on out of town supermarkets ([ITV, 2013](#)). In villages such as Boscastle, the flood events of 2004 led to fears it might become a ‘ghost town’ which did not materialise. Portrayals of villages as these ‘ghost towns’ have been projected onto villages such as Cawsands, West of Plymouth, which may appear to be quiet in the winter but still houses a thriving community even with the absence of the summer throng of tourists or ‘emmetts’²¹ ([ThisIsCornwall, 2008](#)). Seasonal continuity is a fundamental element in this research through social resilience at the community level.

²⁰ A ‘honeypot’ community, or area is a particularly popular visitor attraction which attracts significant tourists and locals increasing both business and domestic property prices alike. It can also be a wider area e.g. Roseland in Cornwall.

²¹ Cornish vernacular for tourists (literally translates to ‘ants’ in the Cornish language).

Community change, moving from a primary resource extraction economy towards a core tertiary tourism and heritage economy, forms an important theme in this thesis. Also considered is the decline in the secondary sector of manufacture and building in Cornwall and preferential policy funding for the growth of the knowledge economy, the so-called quaternary sector ([Willett, 2009](#); [Williams, 2008](#)). Fig. 4-2 depicts Clarks classical theoretical approach to temporal livelihood transitions ([Clark, 1950](#)). It can be seen that primary sector livelihoods ([Kenessey, 1987](#)) decline while secondary sector livelihoods peak and fall with de-industrialisation. Tertiary and quaternary activities then grow as the 'new' form of livelihoods. This view is used in later chapters to describe how the different case study community livelihood sectors have evolved and to assess implications for resilience.

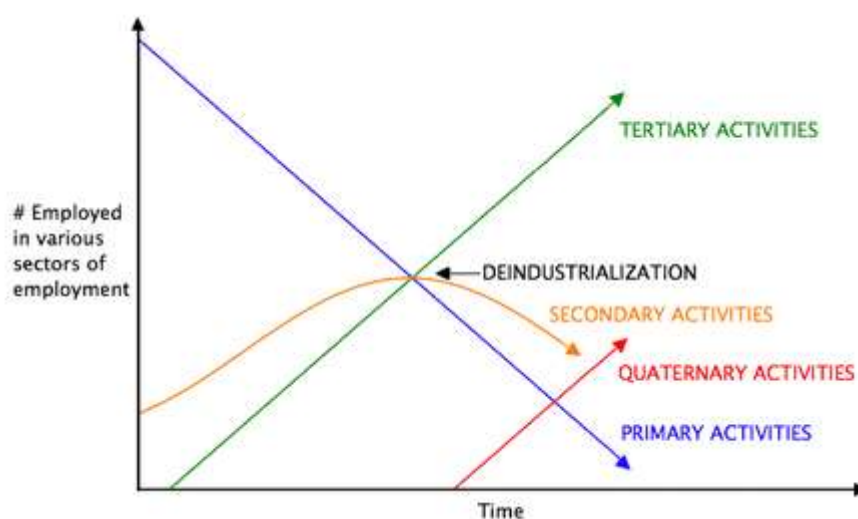


Figure 4-2 : Livelihood sector transitions - Source : ([Clark, 1950](#))

There have been numerous Cornish regional regeneration programmes such as the now defunct RDAs²² and the current Convergence Programme ([ERDF-ESF, 2014](#)), which has seen around £460 million invested from the ERDF (European

²² Regional Development Authorities, Cornwall was in the South Western RDA (SWRDA).

Regional Development Fund) which is the funding source for this research through the ESF (European Social Fund). Regeneration programmes have promised, although functionally failed to deliver a new future in the twenty-first century for towns like Redruth, Camborne, and St. Austell ([Willett, 2009](#)), and there is a new awareness that Cornwall's unique history and heritage can be a valuable asset in that future ([CCC, 2014b](#)). Art forms one of these heritage assets.

The imagery of Newlyn artists strongly captures the sense of tragedy experienced by fishing families, their communities and their relationship to the sea. These artworks capture the vibrancy, deprivation and dependency on extraction livelihoods such as the aforementioned tin mining, smuggling, quarrying and fishing as well as agricultural livelihoods such as farming and market gardening (especially flowers, notably daffodils) ([Buttery, 2012](#)).

The establishment of the picturesque, and the embryonic 'tourist gaze' had already been established before the Newlyn artists arrived in the 1700s by many writers including Daniel Defoe. Walter Langley highlighting the 'picturesque' occupation of the 'fisherfolk' (Fig. 4-3) directed at a grieving widow being comforted after losing her husband to the sea. Forbes noted how the Cornish people were "weather stained and tanned into harmony by the sun and the salt wind. Nature has built up a race of people well-knit and comely, fit inhabitants of such a region" ([Deacon, 2001, p.11](#)).



Figure 4-3 : Loss at sea, Newlyn artist, Walter Langley - Source courtesy : ([ArtCornwall, 2014](http://ArtCornwall.com))

Art can express the notion of 'community' in many rich ways and forms a valuable triangulation approach in combination with written records before the days of photography. Indeed, art captures and expresses far more than mechanical imagery, it conveys emotion and many other projections of community values and social change of value as a contribution to views of proxy resilience .

Further examination of the 'tourist gaze' will take place in Chapters 5 and 7 with reference to historical and contemporary views of identity linked to social resilience and importantly, social conceptualisations, such as social networks.

4.3 Fishing : from multifunctionality to productivism

Fishing has been an important core aspect of primary resource extraction in fishing communities in Cornwall and thus in the case study communities. This section illustrates how wider aspects of commercial fishing impact community fishing, further discussed in Chapter 5.

In Cornwall, it is notable that the sheer number of small ports and harbours on the coast signify how important fishing has been historically. Most fishing enterprises were small independent family concerns with the exception of some fishermen who worked together in 'shared fishing' along the lines of mining groups by a 'cost-book' system which was a basic accounting system for sharing costs and profits ([Buttery, 2012](#)). There are several historical examples of other fisheries organised on a commercial basis, such as the Rashleigh family who focussed on the Newfoundland cod fishery business in the 16th, 17th and 18th centuries along with the Bolitho family of St Ives in the 19th century ([Buttery, 2012](#); [Trewin, 2006](#)). These were bountiful times for marine fishing in Cornwall with a slow but inexorable move towards a productiveness norm in marine fish capture catalysed by technology (discussed later).

The story of the decline in fishing in Cornwall demands mention of the pilchard. For several hundred years, these abundant oily fish, the pilchard (actually large sardines) were the predominant catch up to the 1920s. Pilchards were extracted in huge numbers, up to 16.5 million in a single seine net, once the catch

was made the whole fishing community was mobilised to preserve the fish occupying 24 hours a day for several days until the whole catch was cured in barrels ([Trewin, 2006](#)). The working conditions were, by modern western standards, terrible for the men, women, children and elderly engaged in this. In recent times, pilchards have made a resurgence in UK consumption, starting around 1997, largely due to a rebranding regime renaming the pilchard as the 'Cornish Sardine' which was major commercial coup for the county ([CSMA, 2014](#)).

Fishing decline was also a consequence of the inter-war period with younger fishermen seeking alternative employment, a factor in the outmigration from fishing communities ([Trewin, 2006](#)). There have been many incidences of conflict and tension between different countries over fishing 'territory', from the 'cod wars' in the 1970s with Iceland ([BBC, 1975](#)) to the disputes between Ireland and the Spanish fishing fleets over the 'Irish Box' fishing area ([Barclay, 1995](#)). This threatened the sensitive fishing area off the East Irish coast and saw violent clashes between Irish and Spanish fishers. This was finally settled in favour of conserving the fish stock in 1992 by directives from the Committee on Fisheries and protection status granted in 2003 under an early CFP review.

Factors that influence the decline in fishing are not simply a reduction in fish stocks. It can also be associated with the ability of fishers to land fish controlled by EU based quota and technical operational constraints as well as weather and daylight. Another constraint to fishing is fuel price, perhaps one of the most critical factors in the decline of fishing along with quotas. Marine diesel fuel prices doubled between 2007 and mid-2008 which led to behavioural change in vessel skippers including taking reduced catches, fishing closer to port, reducing exploratory fishing, and ceasing experimentation with less destructive fishing gear ([Abernethy, 2010](#)).

This is linked to seabed damage, threats to fishing, supply chain employment and ensuing economic hardship. Fishing also provides valuable part-time and seasonal jobs in often fragile coastal communities where full time jobs may be scarce ([MMO, 2012a](#)). Cornish commercial fishing is now largely confined to both inshore waters and the ICES²³ fishing governance areas for deeper water fishing highlighted in yellow in Fig. 4.4.

Figure 4-4 : Cornish fleet range (yellow) in ICES regions – Based on source : (ICES, 2012)

²³ International Council for the Exploration of the Sea.

actively fishing community such as Mevagissey in Cornwall. One major fish processing company, Ocean Fish, is located close to Mevagissey in St Austell, and provides employment away from fishing communities ([MMO, 2012a](#)). Fish processing activity has thus moved from the community level to centralised industrial processing facilities and displacing livelihoods. The number of marine capture fishers in the UK ([MMO, 2012a](#)) has slowly but steadily declined since the 1980s (to around 7,000 fishers in 2011).

Governance is a critical aspect of UK marine fishing and fisheries initiated from the EU in Brussels for general fishing policy along with species and country quota allocation. However, local UK byelaws may exert a degree of influence on both fish stocks and the ability for community fishers to access these resources. Community based fishers in Mousehole, Polperro and Mevagissey share some fishing constraints and opportunities. However, they also have unique attributes in their connection to certain fisheries and capabilities to harvest marine stocks.

The EU is responsible for much of the legislation regarding sea fisheries in EU waters and agreements with non-EU countries ([ScotGov, 2015](#)). Cornish fishing vessels used to venture as far as Newfoundland. Now Cornish fishing is restricted closer to the ports and largely confined to inshore fishing and the ICES areas VII a,d,e,f,g,h, VIIj2 and VIIIa (yellow shaded in Fig. 4.4). All quota is managed by the EU and disseminated within these ICES area designations to UK registered commercial fishing vessels via various mechanisms through the MMO²⁴ e.g. directly to fishers or through Production Organisations such as the CFPO in Cornwall.

²⁴ Marine Management Organisations (UK 'Quango').

The inshore fisheries of the UK are subject to a complex set of local byelaws managed by the regional 'IFCAs'²⁵. The Marine and Coastal Access Act 2009 modernised the governance of inshore sea fisheries away from the Sea Fisheries Committees (now obsolete) to the IFCAs from April 2011. The jurisdiction of the IFCAs is within the UK six mile limit zone. The MMO (which manages the IFCAs) is responsible for monitoring and enforcing action on foreign vessels within the 12 mile limit as well as quota distribution, technical limits for fish sizes, gear types, fishery stock management, and control measures such as catch inspection. The MMO also manage licenses to fish, fishing logbooks and the limiting of the number of days vessels can be at sea ([MMO, 2014](#)). All UK fishermen are expected to be familiar with the MMO 'fishing bible', the 'Blue Book' ([UKGOV, 2015a](#)), and sections relevant to the individual vessel. The 'Blue Book' is a comprehensive single collection of UK and EU fishing laws that received many scathing comments from community interviews in regards to its complexity and 'impenetrability'. Bureaucracy is a real emergent issue for fishers described later.

These fishing constraints have a direct bearing on resource dependency and resilience in Cornish fishing communities. Communities that still emphasise fishing heritage but do not practice much fishing may be perceived to have a 'cultural icon' or 'relic' status as opposed to 'real' fishing ([Brookfield, 2005](#)). This assertion forms an important conceptual bridge between resilient behaviour and the fishing-heritage spectrum described in Chapter 3 (see Fig. 3-2) explored further in this chapter.

In Cornwall, there are probably many communities balanced across this conceptual spectrum. Importantly, and like all human communities, they exist in a

²⁵ Inshore Fisheries and Conservation Authorities.

state of flux and change and careful consideration of the validity and impact of observations within these fluxes is critical.

4.4 Demographic change and employment in Cornwall

Demographic change assessment in Cornwall is critical in understanding community impact, change and 'lock-in' effects ([Wilson, 2012a](#)). The escalation in the numbers of holiday homes and second homes, coupled with spiralling house prices and the gentrification 'creep' in Cornwall, is linked to a significant change in demographic trends since the two world wars ([CCC, 2012](#)).

The most significant demographic trend in Cornwall is the aging of the population. Cornwall's population is getting older as average UK life expectancy continues to rise coupled with a long-term decline in fertility rates ([CCC, 2012](#)). Growth has been associated with working age population net migration out of Cornwall over the last 30 years coupled with incoming retirees.

The impact of second homes and holiday homes featured prominently in many interviews in this research. A fierce planning consent contest in recent years in the village of Helford between 'blow-ins'²⁶ and long-embedded commercial fishers illustrated tensions and power configurations linked to political capital between residents and newcomers ([Telegraph, 2009](#)). In brief, members of the marine fishing community applied for planning permission to build a slip road, jetty and car park to assist in complying with EU regulations to land fish on solid land and not on a beach. A number of (primarily) second home owners commissioned a barrister to overturn the planning consent granted for the pontoon plans on the basis that it would spoil the environment they had 'invested into'. This caused vitriolic reactions, adding to the gentrification and identity debate in Helford and other coastal communities. The

²⁶ 'Blow-ins' is Cornish vernacular for (generally) wealthy in-migrants.

dispute is still ongoing and is an important example of an ‘enforced’ community fishing activity trajectory and the significant and damaging tensions generated by some newcomers asserting their wealth, new power configurations and perceived ‘authority’ over the embedded local population.

Fig. 4-5 illustrates the distribution of second homes in Cornwall. The blue circles indicate the three different case study communities and these are Mousehole, Mevagissey and Polperro from left to right respectively. The Mousehole area clearly has a high number of second homes relative to Polperro and Mevagissey. The Roseland ‘honey-pot’ area can be seen labelled as ‘Portscatho and St Mawes’ and also expresses a high degree of second homes. Another observation is the low degree of second homes in the ‘central belt’ area (approximates to the blue rectangle), an area that has traditionally been linked to high poverty levels.

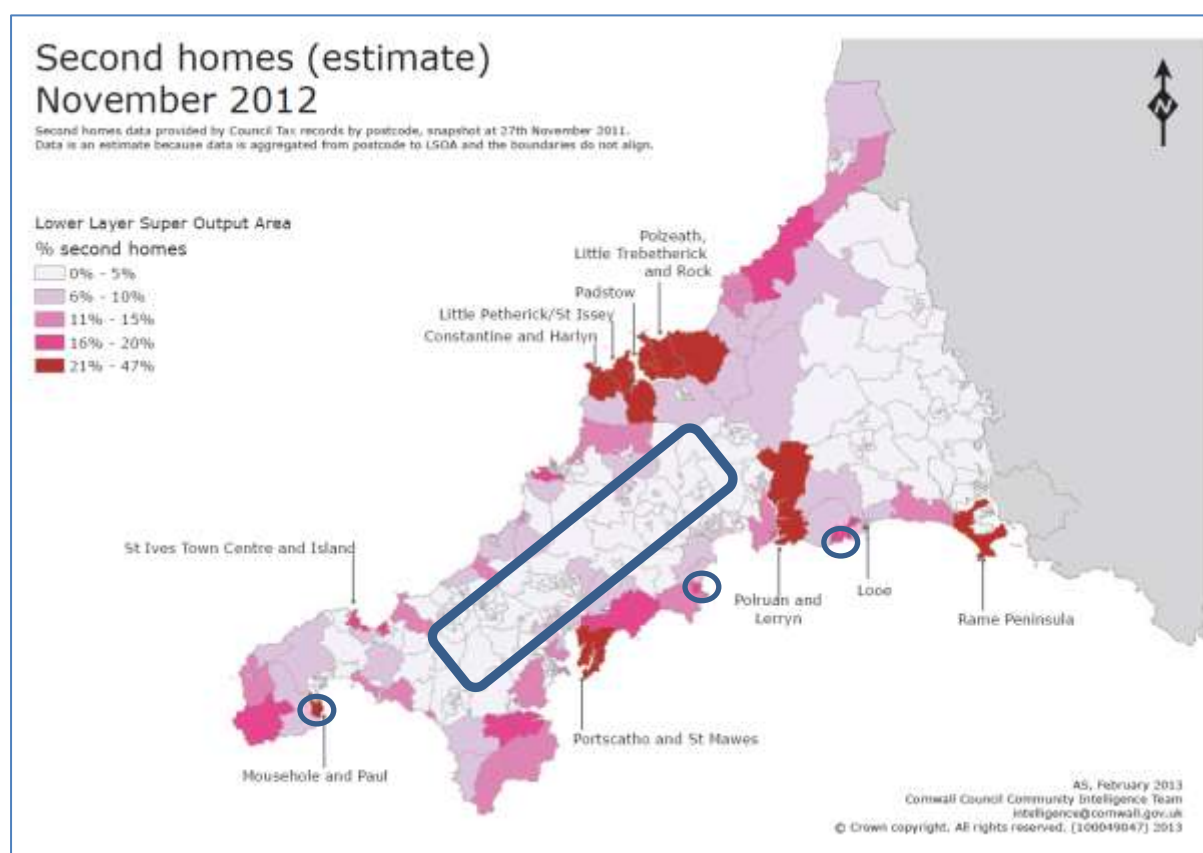


Figure 4-5 : Second homes in Cornwall : Source ([CCC-FOI, 2013](#))

Second homes and holiday homes may seem to have a high degree of commonality. However, on closer observation, they exert very different social pressures on communities in regards to social exclusion and gentrification. The socio-economic dynamics of second home and holiday home ownership can have complexities beyond the apparent ([Paris, 2008](#)).

Second homes are classified as homes that are not the primary residence of the owner whilst holiday homes are homes commercially rented out to clients. However, there are many degrees of overlap within these definitions.

An example of this is a second home that is rented out for part of the year (either officially or unofficially) and a second home for the owners for the rest of the year and examples of this were identified in this research. Some former community residents may sell up completely, or re-mortgage and buy a house in a local cheaper area and rent the (e.g.) holiday cottage out with a view that their children may have the home in due course. The majority of second homeowners, when self-identified, were not normally residents of Cornwall.

The relationship between Cornish second homes, holiday homes and the local economy is a contested area, at least with residents and homeowners in some cases. Surveys²⁷ in Cornwall yielded data indicating the reasons for people having second homes as a) Long term investment (43%), b) Holiday home (48%), c) Retirement home (15%), d) Place away from home (5%), e) Previously main home (10%), and f) Other (9%) ([CCC, 2013](#)). These data are not mutually exclusive.

There is a feeling amongst some that second home owners are contributing towards the local economy and the community should 'just be grateful'. In East Portlemouth (actually in South Devon, close to Cornwall) a dispute involved a

²⁷ Respondents could give multiple reasons.

television sports presenter in a planning row after he objected to proposals for affordable housing. He claimed it threatened the community's 'peace and solitude'. The presenter claimed second home owners should not be criticised for objecting to the proposals and said those who had second homes were crucial to the local economy ([Telegraph, 2011](#)). There is a movement in some parishes to restrict the number of second homes being built to allow 'locals' access to new housing such as in St Keverne (Lizard area) by giving locals preferential planning permissions ([Smith, 2014](#)).

Cornish housing projects benefitting local people include the building of affordable housing in Mevagissey in the Bay View area gaining agreement through local community support after second home owner objections. Mevagissey is the only community out of the three case studies building affordable housing. This resident was encouraged by housing activities in Mevagissey :

"The parish council has recently built 14 affordable houses with another ten just about to be started. All of them for local families including many fishermen, this is very encouraging."

Mevagissey Fisher/Resident ([VRQ-7558](#))

Mevagissey was successful in building affordable housing in the Boatbuilders Court development, which mostly houses the Mevagissey fishing families mentioned above.

4.5 Service change: service deserts

The degradation of many local services in Cornwall and elsewhere can be described as moving towards a 'service desert' status. This describes the 'non-provision' of services such as transport, libraries, health care, emergency services and other aspects of community infrastructure. These can be connected to health, wellbeing and the ability to undertake a 'portfolio' of jobs to assist economic survival in a seasonally driven economy. The summer tourist trade 'window' is used to 'store up' savings for the 'fallow' winter period for many and, indeed, many Cornish coastal community residents depend on social benefits to survive through the winter. Many coastal communities suffer across the winter period through service losses driven by changes in population and holiday/second homes as well as lowered business opportunities. For example, dramatic increases in taxi fares were observed within the area around Mousehole and Penzance relative to other parts of Cornwall for the summer season followed by a 'taxi desert' in the winter.

It is often hard to unravel policy that influences service degradation at the community level with that imposed by national government. However, there can be no denying that a reduced population will draw attention to cost reductions leading to the 'shedding' of schools, post offices, libraries and other services. This inevitably leads to the loss of local jobs. Post Offices, and indeed many 'institutions' constitute valuable community social hubs both in a traditional, and in a real sense ([RSA, 2014](#)). It can be argued that the loss of these social hubs is not just an impact through reduced services through this 'service desertification' and that it has major implications to the social resilience of a community leading to a loss of community cohesion ([Hopkins, 2008](#)).

In rural communities, the dominant typology for the majority of Cornwall, loss of adaptive capacity can be linked to poorly developed (or degrading) resilience and weak multifunctional community development pathways, as pluriactivity opportunities for communities decline ([Wilson, 2010](#)). This is discussed more in Chapter 6.

4.6 Deprivation in Cornwall

Cornwall is one of the poorest parts of the UK ([BBC, 2012a](#)) and has experienced a virtually continual economic decline over the last 100 years, especially in light of the recent recession in the timescales of this research. Research suggests that the various economic development programmes initiated have failed to improve the economy and one possible cause of this is the failure to engage and pay attention to the lived experience of local residents ([Willett, 2009](#)). Willett ([ibid.](#)) describes the tension between the attraction of Cornwall and its indigenous poverty :

“Herein lays the paradox. Not only is the region one of the poorest parts of the UK, but it is immensely attractive to very wealthy people.”

([Willett, 2009, p.101](#)).

Willett focusses her research using narratives of identity to address this issue from the point of view of working with Cornwall in regard to ‘what already exists’ rather than reinventing reality through marketing. This research recognises this perception, acknowledging people and reality, lived lives and real, grounded experiences.

This paradoxical situation is a key aspect of this research, in regards to geographies of displacement and an indigenous population unable to pay ‘market’

prices for property and service loss associated with intrinsic social justice issues. From interviews with visitors, there appears to be some foundation to support the common perception that Cornwall is 'wealthy for all' and that 'people should be thankful they live here' which is demonstrably far from the truth in reality demonstrated by deprivation data and EU emergency funding. Economic capital may not actually ever enter the Cornish economy. Indeed many second homes are bought and sold from outside of Cornwall and only be occupied for a few weeks each year.

The ironic and absurd situation is that the pretty, quaint and idyllic aspects of Cornwall that adorn the brochures and websites attracting visitors to Cornwall is only part of the reality. What is not visible are areas of extreme hardship, often within 'honeypot' areas observed in this research, but seldom on the main roads or visible to the 'tourist' gaze ([Urry, 1990](#); [Urry, 1992](#)).

The so-called 'Disneyfication of Cornwall' ([Kennedy & Kingcome, 1998](#)) portrays mixing the 'imagined' or 'authentic' Cornwall of tourism with the 'real' Cornwall in terms of lived lives and real people. This research is firmly focussed on real communities. However, it is critical to understand the 'imaginary' Kernow in order to gauge its influence on social resilience factors such as social 'invisibility', notions of identity and policy formation. There are various reasons perceived for the declining Cornish economy. One of these reasons is through Cornwall being an entitled playground for the wealthy, another is that the declining economy is driven and caused by the Cornish. It is argued in this research that it is the former view that is predominantly instrumental in this decline.

Cornwall is one of the poorest regions in Europe having an average income per head of £17,200 per annum in 2010, about 25% below the European average

(EU27)²⁸ ([CCC, 2011b](#)). It is the only county in the UK to qualify (or ever to have qualified) for emergency EU funding via the Objective One programme, first utilised in 1999. Cornwall has received such funding of £400m between 2000 and 2006 and £500m from 2007 to 2013. It is due to receive a further £500m between 2014 and 2020 ([BBC, 2012a](#)).

The county is situated at the bottom of a wealth table alongside former Eastern bloc countries such as Slovakia and Slovenia and the average wage for the county is 17% below the UK average ([Independent, 2014](#)). Deprivation is particularly concentrated along the coastlines in the UK. "For people who rely on seaside tourism or England's traditional coastal industries, it feels like the recession hit in the 1980s and never really went away" ([WMN, 2013, p.1](#)). 98% of deprived areas at the LSOA²⁹ level in England are in Urban areas receiving a large amount of attention ([IMD, 2010](#)). However, the remaining 2% are in the rural areas and Cornwall hosts a significant pocketed portion of this rural deprivation.

Fig. 4-6 depicts distribution levels of multiple deprivation indices in the UK. The boxed section, labelled 'Kernow', clearly shows the wide and extensive levels of deprivation throughout the county relative to the rest of the UK.

²⁸ Average across the 27 EU countries at the time of this research.

²⁹ LSOA – Lower Super Output Area (geographical areas of UK Government statistical analysis).

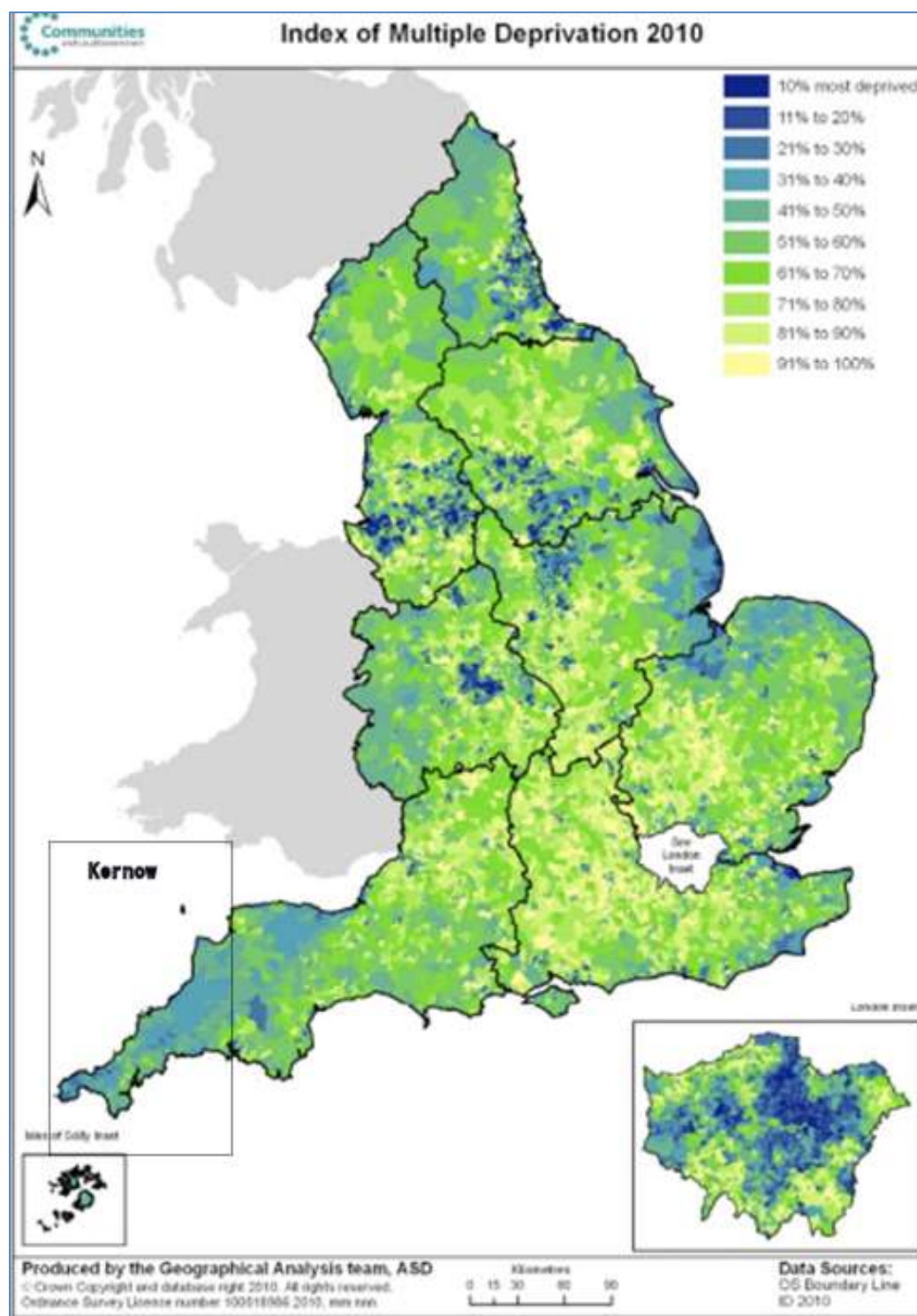


Figure 4-6 : Social deprivation in the UK – Source : ([CCC, 2014a](#))

One compelling aspect of deprivation in Cornwall is the presence of significant variations in economic deprivation within close local neighbourhoods. Fig 4-7 shows

the economic deprivation indices for Cornwall in more detail, showing the distribution of deprivation across the county.

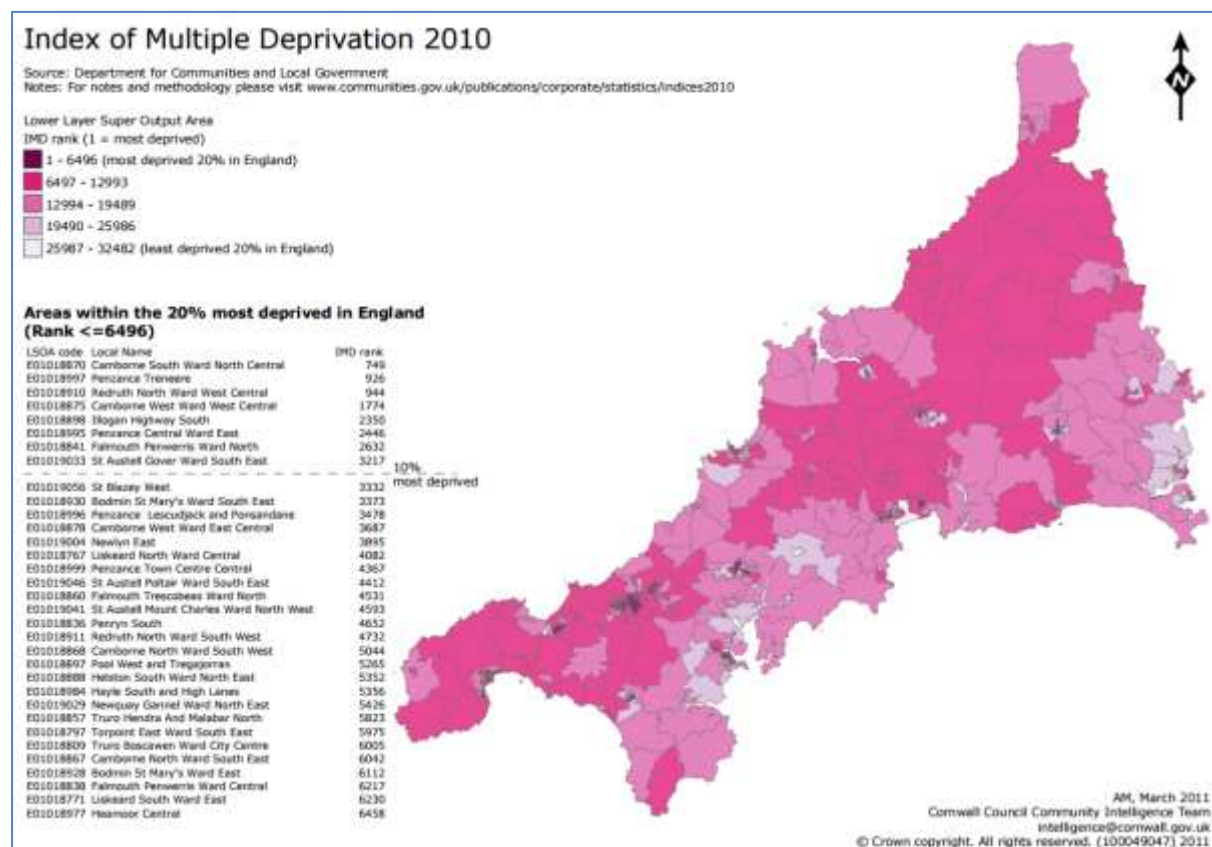


Figure 4-7 : Economic deprivation indices in Cornwall 2010 - Source : [\(CCC, 2011a\)](#)

Deprivation is mainly clustered throughout the UK [\(CCC, 2014a\)](#), but especially so within Cornwall. Of interest here is the extent to which members of fishing communities in Cornwall may have been pushed (marginalised) to the peripheries of their own community geographical areas which is not shown within the granularity constraints of Fig. 4-7.

This continuum of deprivation has been reinforced through second home gentrification, holiday home commercial 'creep' and long term impact on community change. In 2006, North Cornwall was the most expensive local rural authority in

England with average house price nearly 14 times average local earnings ([Paris, 2008](#)). There is a close correlation between second homes and escalated house prices. There may be other factors involved, however, the consequences to locals is clearly creating vulnerabilities ([CCC, 2015](#)).

Wealth distribution is a particularly poignant issue in Cornwall when other factors such as location are considered. Cornwall is a peninsula and provides predominantly seasonal employment for many of its inhabitants, the winter months are hard for seasonal workers when money is scarce and jobs even scarcer and commuting out of Cornwall is likely not an economic option for many people. It is also a very desirable area for the wealthy ([Willett, 2009](#)) as previously mentioned, and many local 'year round' residents are 'locked into' this physical geographical constraint coupled to seasonal working. Escalating housing costs are coupled to a significant reduction in services and these spiralling prices are at least partially driven by properties unoccupied for part of the year or rented to tourists.

In 2012, Cornwall County Council became the first local authority to remove council tax discounts for second homes ([BBC, 2012b](#)) and also introduced a new council tax rate of 150% on homes left empty for more than two years. Accusations of 'financial tourism' have been raised against housing-stock acquisition in both Cornwall and London with the intent of profit and non-occupation ([Guardian, 2013](#); [SI, 2014](#)). Community employment can benefit from the maintenance of holiday and second homes (investigated in more detail in Chapter 6). The reality for many Cornish people is that they have the ability to turn their hands to many types of work as proven through history. The decline in the availability of multiple kinds of work (pluriactivity) and weakened social networks contribute to social vulnerability through a subsequent loss of adaptive capacity.

Cornwall, as a county, has the greatest percentage of property registered as second homes in England and Wales at 5% (around 23,000) with a significantly higher density in 'honeypot' areas ([UKGOV, 2011c](#)). For example, the village of Mousehole was estimated at 13% second homes and around 8% holiday homes³⁰. The average house price has risen dramatically over the last 12 years from £53,700 to £210,300 or 350% and the average house price is now 13 times the average local income ([Guardian, 2013](#)). The housing stock economy is at least partially being driven by people who do not actually live in Cornwall. This is an important economic consideration when discussing the Cornish economy and ramifications to local communities.

The reasons why Cornwall is so poor and successive regeneration projects have failed to deliver to the communities in Cornwall is still a contested issue ([Willett, 2009](#)). Questions arise as to whether a macro-level strategy to regeneration is really appropriate for Cornwall, and this research proposes a more community orientated view. Indeed, linked questions challenge the regeneration approach as actually thwarting desirable pluriactive behaviour in favour of hierarchical, exogenous and constraining 'management techniques' that cannot lend themselves (and are not necessarily scalable) to the needs of communities.

A lack of consultative engagement with local residents in policy formation is a factor, amongst others, in impairing the building of social resilience in Cornish communities ([Willett, 2009](#)).

³⁰ Initial fieldwork observations.

4.7 Conclusions

The aim of this chapter has been to describe and analyse how Cornish livelihoods have been influenced by social, political, natural and economic change.

Key findings

- Cornwall has transitioned from a significantly primary sector resource extraction activities on a pathway to tertiary and quaternary sector activities.
- As a consequence of this, there has been a degradation of pluriactive and adaptive capacity in Cornish fishing communities.
- Demographic change towards a more elderly population is evident driven by outmigration of youngsters and an in-migration of retirees.
- The growth of holiday and second homes has a significant but different impact within communities.
- Poverty and deprivation are abundant in Cornwall and often hidden.
- Successive regeneration programmes have failed to deliver 'positive' change to Cornwall, hindered by a lack of engagement at the community level.

The following Chapters (Chapters 5 to 8) comprise the community resilience analysis chapters.

5 Fishing activities and resilience in the case study communities

5.1 Introduction

The life of a contemporary commercial fisher may constitute part-time to full time fishing, and from all year to seasonal fishing. It may involve working on personally owned vessels to working on a friend's boat, and from working locally to working elsewhere in the world and being a skipper on one vessel and crew on another ([Sepez, 2007](#)).

Fishers can have many and varied roles in the generalised world of commercial fishing, and at various stages of their lives, forming long lasting, wider and multi-scalar fishing and friendship networks. The topology of social networks can influence the behaviour of fishers and vice versa in terms of the density of relations between fishers, the degree of cohesiveness between them, subgroup interconnectivity, and the degree of fisher network centralization and geography.

Academic literature on rural and fishing community resilience suggests that changes in fishing policy, population, and fishing practices are influential resilient and vulnerability factors ([Brookfield, 2005](#); [Marshall, 2007b](#); [Marshall, 2007a](#); [Marshall & Marshall, 2007](#); [Ross, 2013](#); [Ross, 2015](#)). A fishing community with strong local agency, self-determination, well developed links across multiple scales and interactions with regional/higher levels has a tendency towards stronger resilience ([Adger, 1999c](#); [Brookfield, 2005](#); [Wilson, 2012a](#)). Resilience factors may express themselves across many perspectives and scales. These 'multiple resiliences' are contributing factors to the interlinkages and complexity of resilience analysis ([Wilson, 2015a](#)).

This chapter examines and analyses resilience themes and factors linked to fishing activities at the community level. This section introduces this chapter (Section 5.1). Then, a general discussion of commercial fishing is undertaken (Section 5.2) followed by four analysis sections, Sections 5-3 to 5-6 (see Table 5-1), ending with a chapter conclusion (Section 5.7).

Section	Themes, Resiliences and Vulnerabilities
Section 5.3: Historical trajectories 18th – 20th Century	<p>Themes : Created reality/lived lives, natural resource usage & depletion, modernity and linearity, bureaucracy, technocentric transition, CFP, gender, social transition, tourism & eco-tourism</p> <p>Resiliencies and Vulnerabilities : transition, slow rupture, loss of agency (individual, proxy and collective), multifunctionality, poverty, lock-in, increasing complexity, confidence</p>
Section 5.4: Community fleets, fisheries and the harbour	<p>Themes : fleet capacity, fleet typology and gear, constraints to fishing, access to fisheries, marine capture landings, bureaucracy, technology, governance, infrastructure, harbour aspect and topology, harbour services, adaptive marketing, specific community scale, infrastructure, services, funding,</p> <p>Resiliencies and Vulnerabilities : employment/livelihoods, adaptation, scale, multi-factorial, adaptive capacity, resource conflict, transition, collaboration, social networks, succession, in-migration, out-migration, social cohesion, adaptive cycle, localism, architecture, confidence, adaptive capacity, collaboration, co-operatives, reciprocity, exogenous forces</p>
Section 5.5: Fishing networks and succession	<p>Themes : fishing governance, bureaucracy, supply chain, succession cycles, local and extended networks, networks of multifunctionalities, onshore/offshore social networks, livelihoods, CFP/EU funding, tribalism, technology, precautionary principle, youngsters , training and skills</p> <p>Resiliencies and Vulnerabilities : lock-ins, employment, multifunctionality, adaptation, collaboration, reciprocity, identity, intergenerational skills, conservation, succession</p>
Section 5.6: Fishing operations and gender	<p>Themes : gender, role ,identity, visibility in fishing, bureaucracy</p> <p>Resiliencies and Vulnerabilities : adaptive capacity, multifunctionality, collaboration, reciprocity</p>

Table 5-1 : Chapter 5, topics, themes and resilience factors - Source : ([Author](#))

These resilience sections frame discussions of key fishing activity research themes linked to resilience and vulnerability factors.

5.2 Commercial fishing in context

As outlined in Chapter 1, it is vital to frame fishing through community capacity adaption to changes in primary resource access ([Adger, 2000](#); [Jacob & Witman, 2006](#)). Cornish fishing is strongly bounded by energy costs ([Abernethy, 2010](#)), this can differentially influence communities depending on their level of fishing dependence ([Marshall, 2007a](#)). Fish stocks are controlled by EU governance and scientifically driven policy primarily through quota, vessel decommissioning and subsidy ([DEFRA, 2012](#); [Lock, 2007](#)). The rich EU fisheries comprise the largest single agglomeration of fisheries in the world ([EU-Fisheries, 2007](#)). Impact of subsidies ([Sumaila, 2010](#)) and decommissioning of fishing vessels ([Marshall, 2007a](#)) may effectively remove boats from active fishing denuding the number of fishers in the industry ([MMO, 2012b](#); [MMO, 2012c](#)). These activities can have both endogenous and exogenous community impacts from changes in fish stocks. The CFP has been criticized in using the precautionary principle as a risk aversion tool ([CFPO, 2012](#)) to control fish stock access to Cornish fishers. The lag between fisheries science observations and actual fish stocks is a constraint that causes frustration in fishers. However, this is likely preferable to no controls at all. CFP reform was intended to create an ecosystem services approach to fish stocks as well as several measures to improve fishing community lives through infrastructure and fisher training funding. It also provides business advice for fishers. CFP reforms have also included a legally binding commitment to fishing at sustainable levels and the introduction of decentralised decision-making as well as a ban on discards but has

drawn much criticism for its top-down approach and implementation strategy ([BBC, 2014](#)).

Fishing communities in Cornwall and Europe are facing significant challenges due to policy measures aimed at reducing fishing effort in order to cope with a perceived 'crisis' in key stocks ([Urquhart & Acott, 2014](#)). Urquhart ([ibid.](#)) states, that while it is imperative to ensure sustainability of the resource, such policies may overlook the contribution of fisheries to the social and cultural well-being of coastal communities.

Fishing communities are in a constant state of change, driven by endogenous and exogenous influences, adaptively flexing their resources and infrastructure to economic, natural, social and political change outlined in Chapters 2 and 4. Change can be observed through combinations of fast and slow onset-events and processes ([Wilson, 2012a](#)). Key adaptive examples of this in the case communities include the (adaptive) adoption of heritage tourism ([Hale, 2001](#); [McLean, 2006](#)) and eco-tourism, using multifunctional approaches ([Wilson, 2010](#)) through repurposing fishing boats ([Brookfield, 2005](#); [Urquhart & Acott, 2014](#)).

One example of a fast-onset rupture in primary resource extraction, with long-term consequences, was the demise of coal mining in South Wales. Coal mining in South Wales, is, perhaps, emblematic of communities driven to dependence from a singular primary resource extraction regime ([Rees, 1985](#)). This led to tragic consequences from the ideological activities of the Thatcher era, with a catastrophic loss of social cohesion. This increased social injustice and consequently degraded social resilience ([Thompson, 1998](#)). The communities of the Welsh Rhondda valleys were driven into social deprivation on a scale unparalleled in UK post-industrial times, and there was no fall-back position for these communities. The mining

communities were vulnerable and exposed. The mining communities were fractured and lost much of their self-determination, confidence and self-esteem as a result of rapid change to this externally, market and government imposed lock-in to this resource regime. No transition plan was considered by the Conservative government and the mining communities were abandoned by their government. This tragedy has been well documented and took place in a relatively short timescale in the 1980s ([Beynon, 1985](#)). The Big Pit heritage coal mine, in the Rhondda Valleys, lays testament and social memory to the utilization of coal mining as resource heritage in Wales ([MoW, 2015](#)) and the valleys continue to suffer extreme deprivation, poverty, and significant drug and alcohol issues. This is one story, Cornwall is another.

Cornish fishing communities have experienced (mainly) slow-onset change in the balance between resource extraction regimes and tourism adoption, measured in decades and generations. This has been accompanied by fast-onset events, e.g. the implementation of CFP fishing controls and multiple fuel crises. Slow-onset change is not as easily noticed in resilience research as fast-onset change and characteristics or factors may not be so apparent ([Wilson, 2010](#)). Nonetheless a 'creeping' degradation of resilience associated with resource access regime change may leave communities vulnerable ([Adger, 1999b](#); [Adger, 1999a](#); [Wilson, 2014](#)), and unaware of their real vulnerability through complacency or self-delusion ([Brown, 2014](#); [Sapountzaki, 2014](#)).

Cornish pragmatism and utilitarian approaches to natural resource extraction and agriculture has provided pluriactive resilience in rural communities ([Dickey, 2006](#); [Wilson, 2008](#); [Wilson, 2009](#)). However, Cornwall has suffered an almost continual economic decline for more than a century, being one of the poorest parts of the UK. The paradoxical inconsistency between Cornwall's long term poverty

challenges, and its economic success as a tourist region, presents a continuing and significant policy challenge ([Bosworth & Willett, 2011](#); [Willett, 2009](#)). Entrenched resource lock-in and a fracturing of developed resilience such as self-determination along with the growth of the tourist and heritage economy is significant. This suggests that a considered inclusion of the lived reality of fishing and other forms of livelihoods in fishing communities are critical in understanding social resilience. This lived reality ([Fowler & Etchegary, 2008](#)) of these sometimes fractured communities (and the concept of a created reality of heritage tourism ([Kennedy & Kingcome, 1998](#))) is a key aspect of this research. It provides clues as to the drivers of change that have shaped the fishing interests of communities and the trajectories they have adopted, tactically, strategically and often unconsciously.

Cornwall has a long history of natural resource extraction as outlined in Chapter 2. Adger *et al.* ([2005](#)) emphasise that it is erroneous to view natural resources as a key dependency in building social resilience. Nonetheless, natural resources are a factor that influences resilience in fishing operations in this research. As resources become constrained, community well-being may degrade as a consequence of resource competition and depletion in the absence of alternate livelihoods ([Cinner, 2005](#)). Thus, resource availability and access, coupled with the operational aspects of fishing activities, are considered as resilience drivers in the case communities, but not exclusively.

Loss of personal agency degrades social cohesion in social resilience through e.g. the commodification of fishing and linked privatisation ([Adger, 2000](#)). This suggests that fishing communities may become more vulnerable in an increasingly

commodified world³¹ ([Berkes, 2010](#); [Urquhart, 2014](#); [Urquhart & Acott, 2014, p.27](#); [Urquhart, Acott & Zhao, 2013](#)).

Complex issues of social change, coupled with the influence of economic drivers and political and local actors weaken community resilience by increased embeddedness in multi-scalar connectivity as discussed in Chapter 1.

5.3 Historical trajectories 18th – 20th century

Polperro

Fishing was the principal livelihood in the port of Polperro for generations. Polperro was also associated with both smuggling and fishing. Smuggling was a well-managed, profitable and resilient livelihood. In the 1700s and 1800s Polperro residents smuggled gin, tea, tobacco and brandy from Guernsey. In addition, privateering, or the hiring of boats to sink enemy vessels by the British Admiralty, brought wealth to Polperro families ([Johns, 2015, p.1](#)). Local pluriactivity thrived as a combination of livelihoods.

Fishing was dominated in Polperro through two fish species native to Cornwall, the pilchard and the mackerel. Mackerel were caught by traditional handlining³² as they are to this day. Pilchards moved in huge volumes in the 1800s to feed off the Cornish coast and were caught in abundance. Communities were often wholly dependent on pilchards ([Johns, 2015, p.1](#)).

³¹ This is particularly relevant in the pre-Brexit event timescale of this research (see Sections 7.2.1, 7.4.5 and Chapter 8).

³² Handlining is a fishing technique where a single fishing line is used with multiple hooks from a boat.

Mousehole

Mousehole has a broadly parallel fishing history to Polperro. In the 1800s, pilchards, smuggling and privateering were the main livelihoods with the addition of farming, market gardening, and tin and copper mining along with granite quarrying. This provided livelihoods based on a mix of pluriactive primary resource extractive work ([Buttery, 2012](#)) and supporting livelihoods e.g. boatbuilding. Fishing in Mousehole was still a significant operation even up to the early 1900s and the harbour accommodated up to 70 working boats in these years. The catch was mainly pilchards and it was said that you could walk the harbour from end to end across the boats ([Buttery, ibid](#)). Fig. 5-1 depicts Mousehole picturing much of the community in the left hand photo collaborating in pilchard processing circa 1900. The right hand photo shows the village fire and the acrid train oil smoke spilling into the still evening air and the traditional sail and oar³³ Mousehole working boats ([Johns, 2015](#)).

While men were at sea, women were engaged in salting, pressing, bulking and cleaning the fish ashore as well as leading domestic life. The importance of women in fishing operations is critical for all the communities in this research. Gender demarcations of social responsibility were that of primarily women running the home and the men doing the fishing and working at times together with the women, for example, collaborative fish processing across the community (see Fig. 5-1).

³³ Boats were powered by sail and oar prior to the advent of steam and internal combustion engines.



Figure 5-1 : Mousehole ca.1900 - Source : ([CornwallGuide, 2012](#))

Life was hard for fishing families in all coastal communities and their lives should not be romanticised. Collaborative working, reciprocity and common survival instincts were critical in these days which are still important for community cohesion and social resilience today ([Wilson, 2015a](#)). One Mousehole resident captures a view of the trajectory of Mousehole from its true working history, with its hardship and poverty to its contrived ‘reinvention’ as a ‘quaint’ and heritage-orientated fishing village :

“How could a fishing village ever have been called quaint in those days ?”

Mousehole resident ([MRQ-337](#))

This illustrates notions of the created imagery of Cornwall that often does not communicate or correlate with the grim nature of life in historical traditional fishing villages.

Mevagissey

The port of Mevagissey shares the pilchard history of the other communities and is geographically closer to Polperro. It also has a pluriactive livelihood history, again shared with Polperro and Mousehole being a mix of fishing, mining, agriculture and smuggling. Another major source of work is close to Mevagissey, the China Clay area. The huge China clay industry employed seven thousand workers by the mid-19th century in the St Austell area ([CornwallGuide, 2015](#)) and undoubtedly some of these came from Mevagissey.

Mevagissey mainly landed pilchard and some herring in the 1900s (see Fig. 5-2). Along with Mousehole and Polperro, they were geographically isolated communities in relation to 'mainland' England with few transport options and dependent on subsistence livelihoods.



Figure 5-2 : Mevagissey inner harbour around 1900 - Source courtesy : ([Mevagissey Museum](#))

All these fishing communities between 1800 and 1900 adopted pluriactive livelihoods, with mining, agriculture, quarrying and smuggling featuring strongly as part of these multiple closely linked livelihoods. Analysis of the local businesses, suggests that there was a strong commercial support industry for fishing activities, from net makers, hogshead makers, fishing and clothing manufacturers to ale houses. Communities were 'locked-in' to an insular and subsistence grounded, but pluriactive way of life. This mix of livelihoods in the 1800s and 1900s expresses a commonality of community livelihood and resilience traits and provides a good platform to observe and analyse change in resilience characteristics and processes.

A 'power' rupture was to drive new pathways of change shaping the resilience trajectories of the case communities through introducing increased governance and bureaucratic complexity at community level and shifts to exogenous power configurations. This suggests that power configurations and agency are critical factors within fishing communities.

Fishing since 1900

As described in Chapter 4, life in the 1900s in Cornish fishing villages was hard and dangerous for everyone, with severe poverty, residential overcrowding, and considerable health issues allied to poor transportation linkages across the peninsula and North East to 'mainland' England. Livelihoods were still pluriactive and locally based, with one notable exception being the long fishing trips to the cod fisheries of the Newfoundland Grand Banks ([Rose, 2010, p.3](#)). There was a manual labour demand and collaborative need in each community in getting food to the table ([Deacon, 2001](#); [Tompsett, 2006](#); [Willett, 2009](#)).

These pluriactive community livelihoods were mainly geographically localised in the 1800s, and thus were exposed predominantly to local issues of scale. Fishing communities in general terms, became exposed to multi-scalar as well as cross-scale perturbations over time, from their artisanal roots. This is linked to an evolving vulnerability through the degradation of local decision making and agency ([Jentoft, 2011](#)).

Fig. 5-3 illustrates long-term community fish landings from 1900 to 1964 for the case study communities.

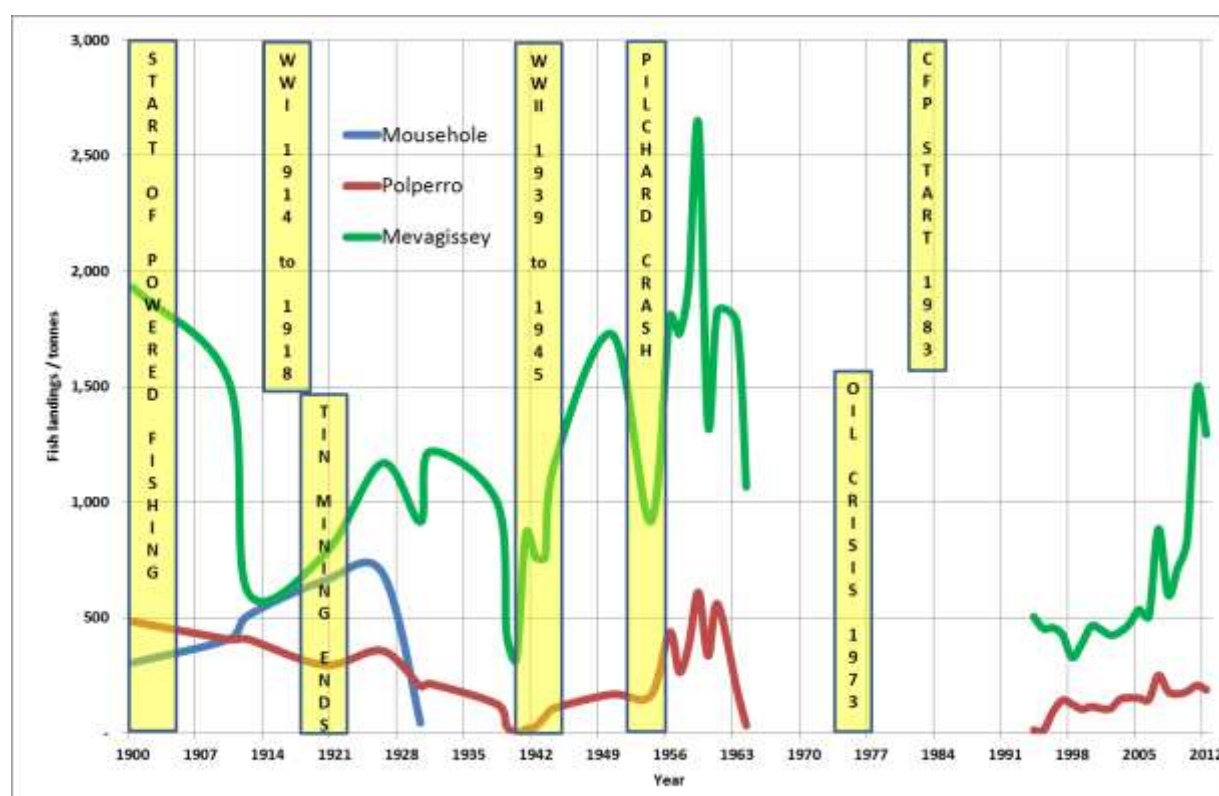


Figure 5-3 : Community fishing timeline – Data source : ([MMO, 2015](#))^{34 35}

³⁴ 1963 to 1992 data not available, MMO reporting criteria changed to omit minor ports in this time-frame.

³⁵ Mousehole data in Fig. 5-3 is not available after 1939 as these data were merged into those of the port of Newlyn and the data set cannot be disaggregated.

The resilience of fishing operations is influenced through a multiple combination of drivers. For example, those of environmental e.g. fish stocks ([MMO, 2015](#)), harbour architecture (covered in next section), climate change as discussed in Section 5.2 ([Southward, Boalch & Maddock, 1988](#)), technological change (e.g. powered fishing vessels, and the reduction of manual labour through powered fishing gear. Later came impacts from radar, sonar and GPS ([Poul, 2012](#)). Others drivers include social change e.g. social networks ([Buttery, 2012](#)), war ([Poul, 2012](#)), CFP resource management ([Earle, 1994](#); [Europa/EU, 2012a](#); [Europa/EU, 2012b](#)) and economic factors (e.g. fuel price ([Abernethy, 2010](#)) as well as quota license acquisition ([Cardwell, 2014](#))).

At the end of the 19th century, fish landings and operations in the three case communities were markedly different and, at the inception of technological change through powered fishing (see Fig. 5-3), Mevagissey was landing around 2,000 tonnes of fish a year, mainly pilchard and herring. The communities of Polperro and Mousehole were running smaller fishing operations, landing around 500 and 300 tonnes of fish annually respectively and already showing decline due to the powered Spanish fleets that were outcompeting these ports ([Buttery, 2012](#)). Mousehole was not affected, perhaps due to its distance from these two ports and did not share their common fisheries ([Buttery, ibid](#)). Mevagissey continued to be vulnerable for a decade before 'bouncing back' to recovery after losing nearly 75% of its landing capacity. Competition with foreign fleets was one factor that led to operational fishing reduction in all the case study fishing communities.

Mousehole fish landings dropped drastically in the mid-1920s (see Fig. 5-3) as Newlyn expanded its fishing operations (in parallel with increased mechanisation) to a level close to present day landings. This displaced fishing operations from

Mousehole. Even with the data gap apparent in Fig. 5-3, from interview data it is unlikely that landings have changed significantly from the 1930s to the present day ([Buttery, 2012](#)).

In the early 1940s, the Cornish pilchard fishery collapsed, an environmental rupture which is evidenced from the Mevagissey data in Fig 5-3. This was followed by key gear adaptations to landing different species ([MMO, 2015](#)) as was the case for Polperro. These adaptive changes are critical aspects of fishing resilience, and, as discussed later, adaptive capacity is a resilience factor which has come under threat in the early 21st century through CFP legislation and gear usage controls.

Fishing in the 1960s and onwards

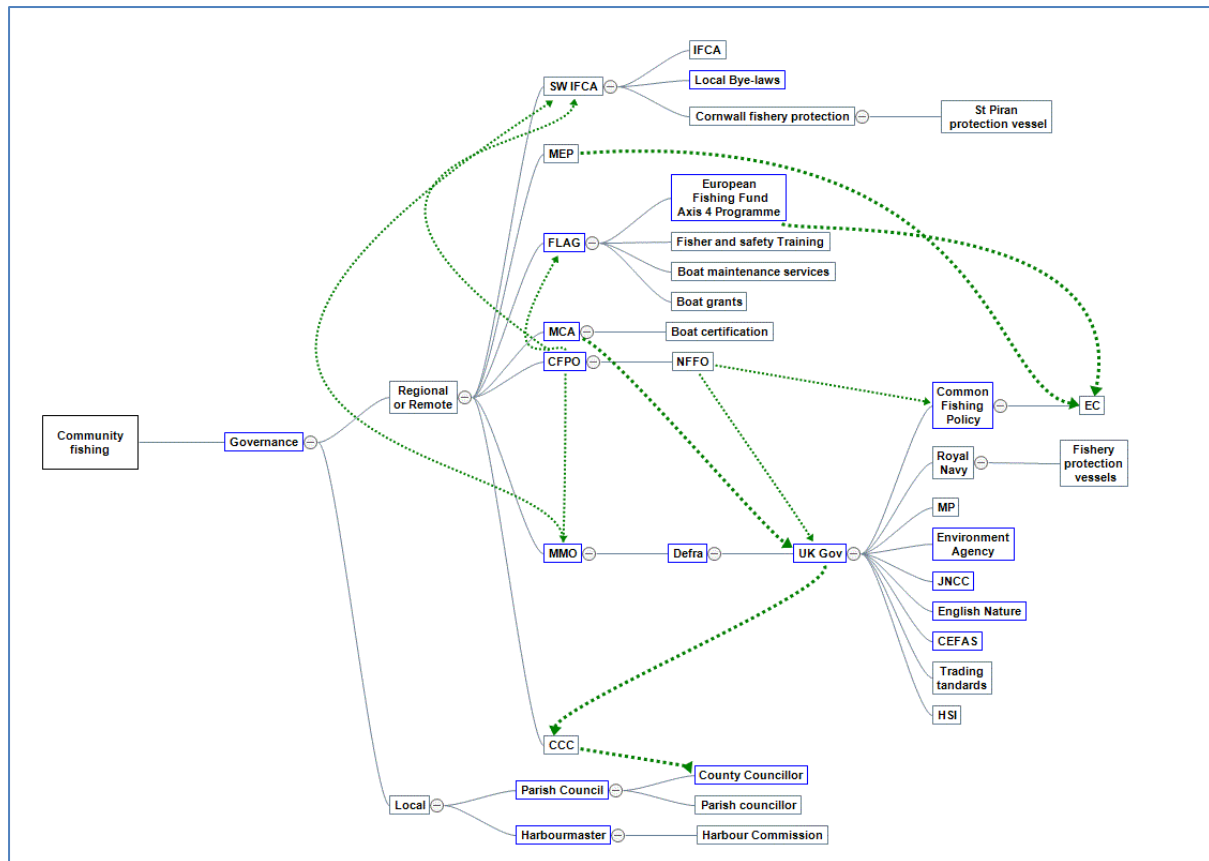
A significant rupture to Cornish fishing in the 20th Century was that of the inception of the CFP and ensuing complexity and bureaucracy. The other huge and influential driver was that of fuel crisis events. Fishing had become totally dependent on diesel fuel with several major global oil crisis events as exogenous factors fuelling a loss of resilience within fishing communities. Fishing had visibly, and in some ways, unconsciously, become a techno-centric industry reliant on oil. Reliance on technology can create vulnerability in communities by creating 'single systemic points of weakness' placing fishing activities in vulnerable situations and causing economic hardship ([Abernethy, 2010](#)). In the 1800s, simple extraction principles for fish were not driven by exogenous factors, such as fuel, but by manual labour and wind-powered vessels. The drive to productiveness and market forces has created a technology 'lock-in' that allowed few options (thus limiting adaptive capacity). Resilience in the fishing communities has become a casualty of this drive for profit

through technology, neoliberal values and the quasi-privatisation of quota ([Cardwell, 2014](#); [Mansfield, 2004](#); [Mansfield, 2007](#)). Mousehole was already transitioning away from fishing activities from the turn of the 20th Century towards a tourism and heritage economy due to the expansion of its neighbour, Newlyn. In Mousehole, this change in trajectory, likely fortuitously, pre-empted wider community impact from fishing based issues such as quota. Nonetheless, the few remaining fishers still endure the bureaucratic overheads of modern fishing.

Fishing fuel prices doubled between 2007 and 2008 ([Abernethy, 2010](#)). This had impacts on both fishing and the wider communities, fish prices remained static but the fishers were forced to absorb the increased costs, analogous to supply chain profit concentration in the farming practices of the UK which has driven many farmers to bankruptcy ([Banks & Marsden, 1997](#); [Kneafsey, Ilbery & Jenkins, 2001](#)).

5.4 Community fleets, fisheries and the harbour

Fig. 5-4 illustrates the governance network that exerts both influence and legislative control on community fishing spanning the local, regional, national and CFP context.



Direct governance organisations influencing case community fishing is through the MMO, the SW IFCA, and the MCA. Influence on policy is via the MEPs and the Producer Organisations such as the CFPO (see Fig. 5-4) and, to a certain degree, the MMO debates policy with fishers in terms of ‘on the ground’ interpretation of legislation. The complex nature of fishing governance that community fishers are exposed to is evident. The extensive bureaucracy and paperwork for even small-scale fishing was an emergent issue early in this research and has led to a hidden burden on fishers managing the growing paperwork and electronic data capture required through legislative processes.

In addition to governance, there are many factors that influence the resilience and capabilities of a fleet in its fishing efforts. Examples of this are fleet size, harbour

infrastructure, logistic complexities, fisher capability, local and remote market dynamics, alternative vessel usage and vessel types and capabilities. In this section, landings, fleet and fisher data are analysed to assess how fishing contributes to fisher employment and livelihoods for each fishing community.

Local community fishing agency imposes only a weak influence on national and EU governance in fishery governance with the exception of local influence on local byelaws inside the six-mile limit.

Table 5-2 illustrates some of the factors that influence fishing operations for selected communities. These data were mainly derived from secondary sources augmented by field observations. Selected data from Plymouth, Newlyn and Brixham (shaded) are also integrated for comparison as they constitute significant South West commercial fishing ports.

Home Port	No. boats < 10m	No. boats >10m	Tot. Boats	No. boats used for eco-tourism	No. FT fishers	No. PT fishers	Total fisher FTE ³⁶	No. Fishers <21 yrs old ³⁷	ICES fishery areas (Fig 4-5)
Mousehole	6 (100%)*	0 (0%)*	6*	0*	3*	3*	4.5*	0	Vii e,f
Polperro	10 (70%)	4 (30%)	14	4*	10*	5*	12.5*	1	Vii e
Mevagissey	58 (92%)	5 (8%)	63	3*	57	12	63	6	Vii e
Plymouth for comparison	166 (84%)	31 (16%)	197	n/a	n/a	n/a	n/a	n/a	Vii e,d
Newlyn for comparison	171 (76%)	53 (24%)	224	n/a	n/a	n/a	n/a	n/a	Vii e,f
Brixham for comparison	67 (57%)	51 (43%)	118	n/a	n/a	n/a	n/a	n/a	Vii e,d

Table 5-2 : Fishing fleet data - Data source : ([MMO, 2012a](#)) and field observations³⁸

Mousehole has six active fishing boats (Table 5-2) which fish from the summer only as the harbour is blocked by heavy wooden baulks in the winter

³⁶ FTE, or a full time equivalence, is a factor used to assess total fishing work effort based, in this case, on a 50% FTE estimate for part-time fishers and 100% FTE for full-time fishers.

³⁷ Figures for fishers under 30 years of age were obtained by consulting fishers and Harbour Masters, these data are not available from known secondary sources.

³⁸ Numbers marked with an asterisk are observational estimates undertaken during the field research.

months that constrain the fishing capabilities of Mousehole. However, historical evidence ([Buttery, 2012](#)) indicates that the baulks were raised and lowered over the winter. It is likely the demand capacity of the port, in combination with the available manual labour, has created the overwinter harbour closure. Mousehole is a drying harbour that constrains vessel entry and exit. Fig. 5-5 illustrates these baulks in situ just before their extraction over Easter 2013. At the top right hand corner of the picture, fishing and leisure boats can be seen having been hauled out to the car park level for protection over the winter.



Figure 5-5 : The port of Mousehole harbour entrance : wooden baulks - Source : ([Author](#))

From the physical resilience perspective of the harbour, the baulks protect the fragile wooden infrastructure of the harbour on which the whole wharf sits. This

includes the sole pub in the community, a prospect not lost on one community member :

“If those baulks weren’t there overwinter, the Ship Inn would be floating towards the Scillies.”

Mousehole resident ([MRI-002](#))

Mevagissey has an extensive infrastructure spanning two harbours (one inner and one outer). The harbours are open all year and have no barriers to vessel transit except those of the weather and the drying inner harbour. The outer harbour has deep moorings in all tidal states. Fig. 5-6 shows the inner and outer harbours and the small and tidy tourist beach. The outer harbour provides shelter for boats on deep-water moorings and easy sea access, and the inner harbour is used for smaller boats that can ‘take the ground’³⁹. Fishing services include an ice making plant, fish landing cranes and maintenance facilities. Mevagissey has well developed harbour services for the fleet. These services are a significant resilience factor.

³⁹ Vessel that can stay upright and safe when grounded on the seabed by supporting legs or by hull design.



Figure 5-6 : Mevagissey's inner and outer harbours- Source : ([Author](#))

Fig. 5-7 shows the drying inner harbour of Mevagissey, note boats 'taking the ground' and the easy access for service vehicles to the quay to the top left of the image. Leisure vessels can be seen to the top right also 'taking the ground'. The white building to the bottom right is a commercial fish stall, selling fish straight from the boats through a licensed fishmonger. Unseen to the right of the stall is the extensive ice-house and chilled storage (visible to the left in Fig. 5-6). Note the 'stubby' 'sub-ten' trawler, Imogen II at the bottom right This is an example of a modern design producing an efficient trawler under 10m in length benefitting from quota rules governing the 'sub-ten' fleet. This trawler is capable of deep sea, multi-day operations. This is as an adaptive response to legislation size constraints.



Figure 5-7 : Mevagissey – drying inner harbour - Source : ([Author](#))

Polperro hosts around 14 boats in its single, drying harbour (see Table 5-2), access is tidally determined and weather dependent. There is a mechanical storm gate, which, unlike the Mousehole barrier, can be opened as required to allow vessels to enter and leave the harbour. Nonetheless, the port is potentially capable of 365 day operation albeit with tidal and weather dependence. In Fig. 5-8, the profitable scalloper, PE474, the Karen Marie, is shown with its scalloping trawl gear visible.



Figure 5-8 : Polperro harbour at high tide - Source : ([Author](#))

Tourism and fishing sometime come in to conflict. A pushchair symbolically sits amongst the heavy fishing gear that is a necessary part of working fishing ports (Fig. 5-9). Different sectors of the community may have conflicting opinions in whether working fishing gear is ‘appropriate’ or ‘safe’ in a tourist area, contrary to the operational needs of a significant working fishing port.



Figure 5-9 : Polperro – pushchair with fishing gear - Source : ([Author](#))

Thus, tensions can exist between the business of tourism and the business of fishing which can cause conflict.

The fleets

Mousehole fishing vessels comprises six 'sub-ten' vessels (see Table 5-2), suggesting that fishing takes place on an inshore, single day, and local, basis. Turning to Polperro, home to fourteen fishing vessels, there is a different balance of types of fishing vessel. Four of the 14 vessels (30%) are over 10m vessels, loosely denoting their capability to undertake extended, multi-day trip, offshore fishing trips (Table 5-2). The 'super-ten' fleet might be viewed as being more resilient in fishing operation capabilities from both a weather perspective and 'getting to the fish' but have much higher overheads and scales of capacity, and may, arguably, be more environmentally destructive than their inshore counterparts.

Mevagissey has a relatively large fleet (63) compared to Mousehole and Polperro and comprises mainly 'sub-ten' vessels (58 or 92%) and around 5 (8%) 'super-ten' vessels and the Mevagissey to Fowey Ferry. This fishing fleet is mainly targeted at inshore fishing. The port is capable of housing many larger vessels in the deep-water outer harbour and has residual capacity for fishing and leisure vessels.

As discussed earlier in this chapter and in Chapter 1, quota is a controversial issue among many fishers since its enforcement in the mid 1970s. Investment plays a key part for boats in the 'super-ten' fleet. The value of a vessel and its annual quota may both run into millions of pounds which is at a very different scale compared to that of 'sub-ten' vessels which are generally between £5K-£30k for individual vessel value ([Cardwell, 2014](#)). At least one exception is the stubby trawler shown in Fig. 5-7. This is an example of a boat 'custom built' to be a highly efficient offshore and inshore trawler manufactured to be just under 10m to benefit from 'sub-ten' fishing legislation and quota allocations at the time. There were a few examples of boats in this research of boats 'chopped down' to under 10m as a

deliberate adaptive strategy to increase access to quota. Vigilant of this, horsepower limits have been imposed on vessels as a secondary control mechanism by the CFP through the MMO ([MMO, 2014](#)).

The scale of investment is also an important consideration, especially regarding 'entry level' constraints placed on new fishers to invest in expensive quota linked to bank lending constraints. Fishing quotas are not treated as assets in the banking community as they are reviewed annually and termed 'volatile' as they do not exist for more than one year. In addition, fisheries can be closed more or less at will by the MMO through the CFP and byelaws, adding to the volatility of quota as a 'bankable' asset. Thus, it can be inferred that there are two major factors at play for new entrants into 'super-ten' fishing or those wishing to change their typology of fishing. Firstly, the cost of quota (if targeting quota fish) can be very significant, and, secondly, the cost of the vessel, labour, gear, fuel, and other overheads. Both these factors are significant barriers or vulnerabilities for potential fishers and it is this investment that likely drives choice to elect between 'super' and 'sub-ten' fishing.

Landing data for both fish and shellfish were analysed to assess the relative economic contributions made to the communities through fishing activities. This builds an understanding of the fishing capacity for each community. Landing data was only available for the ports of Polperro and Mevagissey in recent years, Mousehole landing data was not available as the MMO categorise Mousehole fish landings as part of Newlyn landings and these data cannot be disaggregated see (Fig. 5-3) ([MMO, 2013](#)). Thus, estimations of landings are very difficult to determine in Mousehole. However, from visual observations of catches by fishers, estimates were made and shown in Table 5-3.

Landing data (2012)	Mousehole	Polperro	Mevagissey
Fish (MMO, 2012c)	£94,000 ^{est}	£431,000	£1,904,000
Shellfish (MMO, 2012c)	£9,500 ^{est}	£82,000	£251,000
Total Sales (MMO, 2012c)	£103,500 ^{est}	£513,000	£2,155,000
Sales per boat	£17,250 ^{est}	£36,600	£34,200
Sales per FTE fisher	£23,000 ^{est}	£17,100	£34,206
Sales per FTE fisher relative to Mevagissey	62% ^{est}	67%	100%
% total sales relative to Mevagissey	5% ^{est}	24%	100%
Number of FTE fishers	4.5	12.5	63
Fishers as % of total population	0.6%	1.0%	3.0%
Landing sales per member of community	£148	£425	£1,018

Table 5-3 : Landing data for case communities - Data Source : ([MMO, 2012a](#)) and estimates

Also shown is the approximate economic contribution made by fishing to each community, with Mousehole generating about 5%, and Polperro around 24% of the Mevagissey total of £2.15m (100%) sales turnover (respectively). Operational costs of the fleet may vary considerably with vessel type and fisheries visited and are not accounted for here. However, the rough orders of magnitude for sales per boat are about the same for Mevagissey and Polperro in Table 5-3.

Data is not available to disaggregate sales for full time fishers from part time fishers, although it is accepted that skipper/boat owners will take a larger share as they are responsible for the vessels, and fuel and maintenance amongst other expenses ([VFI-002](#)). FTE fisher sales figures should be used with extreme caution in interpreting benefits to individual fishers and serve here only as a general guide to the livelihoods of fishers. Operational factors such as number of crew on a boat and boat types may influence operational costs significantly ([FGI-001](#)) and these figures should reflect this constraint in comparative discussions. Fishers often operate a

share catch system, where the value of a catch is divided amongst the crew, the skipper and the boat in an agreed ratio ([MRI-003](#)).

The intention in using these landing data is to demonstrate the difference in the fishing operations between the case study communities and to examine how their tactical and strategic approaches to fishing have developed. It also serves to highlight the drivers that have influenced decision making and the impact of fishing operations within these communities as part of community social resilience.

Fig. 5-10 graphs the gross landing tonnages of Polperro and Mevagissey for demersal, pelagic and shellfish catch from 2008-2012. Of note in this graph is the dramatic increase in both demersal and pelagic landings by weight for Mevagissey from 2008-2012. This dataset is adopted as the latest available for research use and constitutes a six-year time window to observe recent fishing traits across the communities.

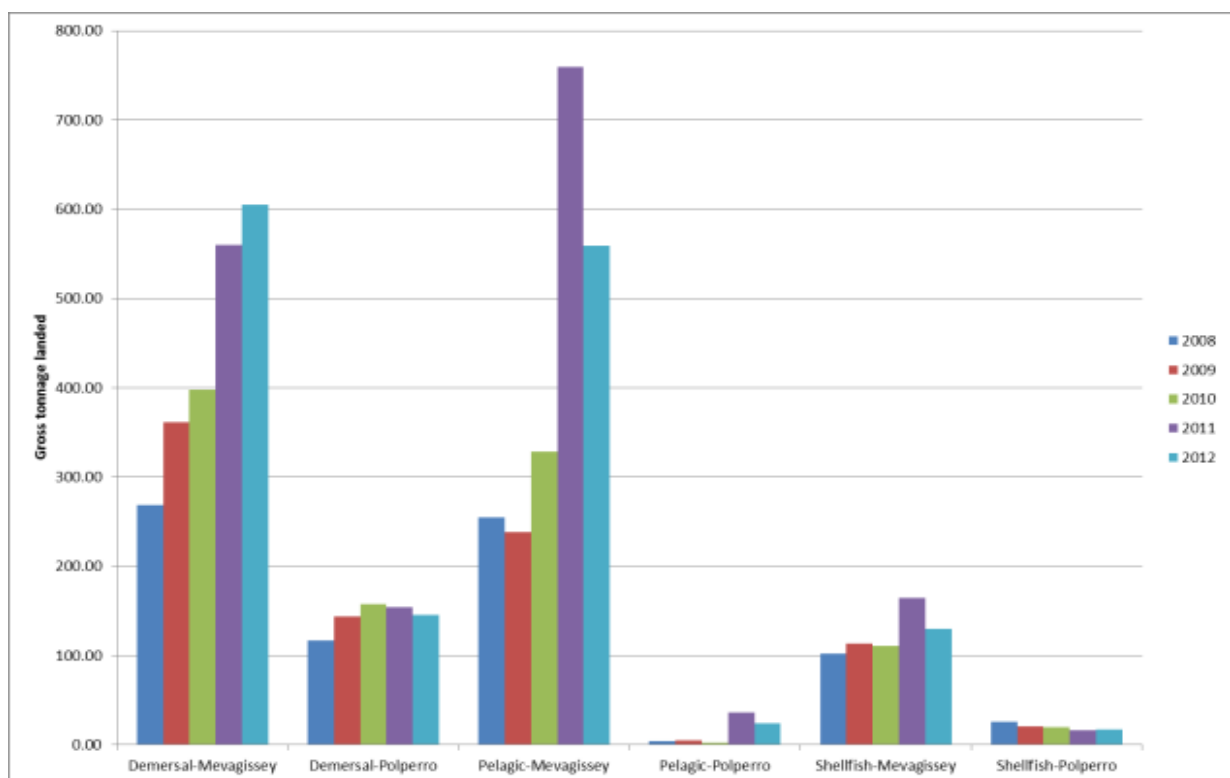


Figure 5-10 : Gross tonnage landed in Polperro and Mevagissey - Data Source : ([MMO, 2012a](#))

Fig. 5-11 pictures the gross sales for Polperro and Mevagissey for demersal and pelagic fish and shellfish. Of note in this graph is the dramatic increase in Mevagissey demersal sales correlating with the data in Fig. 5-10 in terms of general trends. However, there is no corresponding upward trend correlation with Mevagissey pelagic sales. This apparent anomaly is now examined.

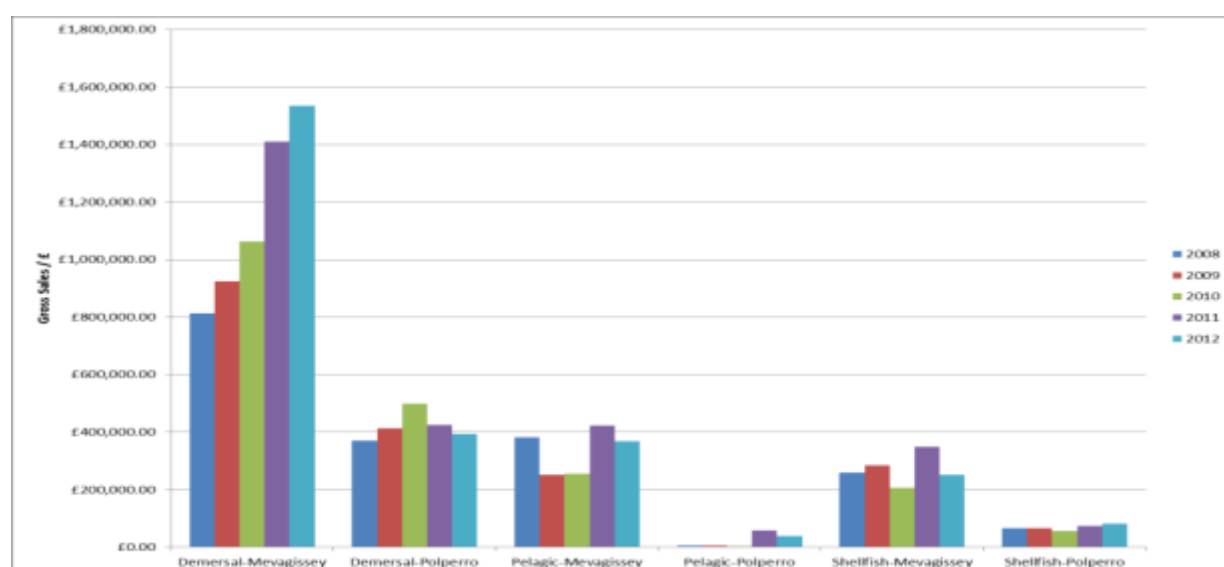


Figure 5-11 : Gross sales / £ in Polperro and Mevagissey - Data Source : ([MMO, 2012a](#))

Fig. 5-12 expresses the sale price per tonne of fish and shellfish landings, of note in this graph, is the unit price decrease in Mevagissey pelagic catch, the increase in Polperro pelagic catch value and the increase in Polperro shellfish catch unit sales prices. Polperro also appears to show a unit price rise for its shellfish later ([PFI-002](#)). This is thought to be connected to the growth of scallop fishing. Changes within the pelagic fishing effort of Mevagissey may be influencing the value of its catch in unit terms over time ([VRI-005](#)).

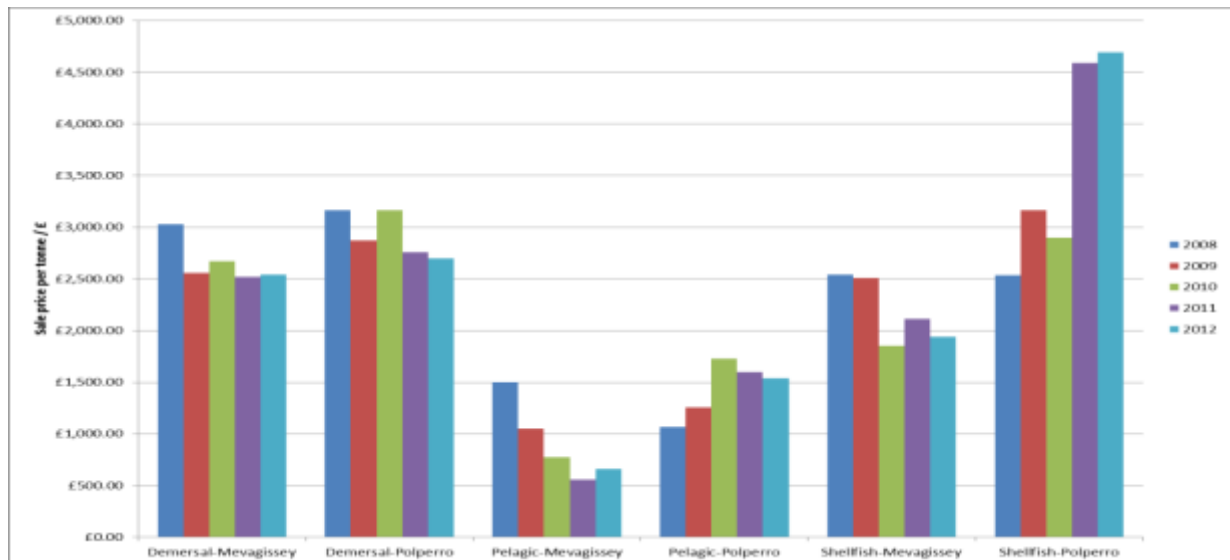


Figure 5-12 : Sale price per tonne/£ in Polperro and Mevagissey - Data Source : ([MMO, 2012a](#))

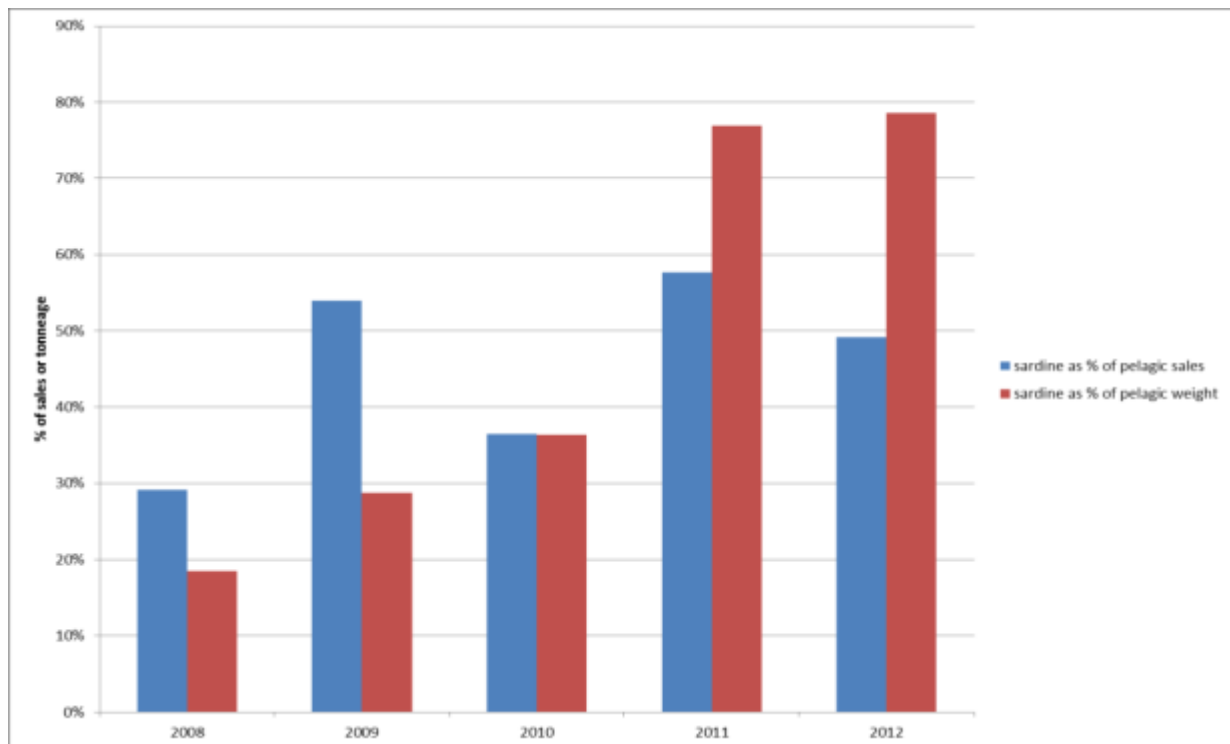


Figure 5-13 : Sardine contribution to Mevagissey pelagic catch - Data Source : ([MMO, 2012a](#))

Fig. 5-13 explains the contribution made by sardines to the total Mevagissey pelagic capture for both weight and value. It also shows that the landing weight of sardines as a total of pelagic catch has increased from 18% to 78% from 2008-2012 ([MMO, 2012a](#)), nearly eight kilos out of every ten kilos of pelagic fish landed now in

Mevagissey is sardine from a figure of around two kilos in ten in 2008. Clearly, the unit value of the fish has dropped over time associated with a large increase in volume ([VFI-005](#)). Mevagissey fishers saw a niche opportunity with the advent of the Cornish Sardine phenomenon prompting an adaptive move to ring-netting for pilchard ([VFI-004](#)). This graph also indicates that sardine has become a lower valued fish composing an increasingly large proportion of the pelagic catch in Mevagissey over time.

The conversion to ring-netting for pilchard by Mevagissey fishers mirrors the pilchard fishery boom of the 1800s and early 1900s, but now with powered boats and fishing gear. The current fishing 'downside' for Mevagissey is that the unit value of sardines has decreased as a market response to demand and supply. Mevagissey has been very successful in an adaptive trajectory shift away from low volumes of high value quota species towards high volumes of a historically lower value non-quota species, the pilchard ([VGI-007](#)).

This 'rebranding' of the pilchard has been a significant success story In Cornwall, and especially in Mevagissey Bay, the prime fishery for Mevagissey inshore boats along with and the Mounts Bay fishery serving Newlyn and Mousehole ([MFI-011](#); [VFI-003](#); [VGI-007](#)). In 1997, pilchards sold at £0.015 a kilo. This increased to around £1 a kilo in 2003. One witty resident interviewee commented on the 'miraculous transition' of the humble pilchard to the Cornish sardine :

"They go into the machine as a pilchard and come out as a sardine."

Mevagissey resident ([VRI-005](#))

Polperro shellfish data (see Fig. 5-11), observes that the rise in sales was primarily influenced through scalloping driven by two scallopers. The landing figures have increased by a factor of around 400% in this time-period, whilst the sale value per tonne of scallop has halved. Nonetheless, the gross profits have increased dramatically as demonstrated in Fig. 5-12.

While some Mevagissey fishers are profiting from adaptation to sardine, there is also a risk that vessel 'track records' in catching other species may suffer. The consequences of this may be loss of quota for boats if this 'track record' is not maintained ([WGI-001](#)). If sardine becomes a quota fish, this may present a real issue in fishers losing vessel quota on other species they previously landed, along with the cost of converting their boats back from ring-netting operational capabilities. This adaptive capacity to adapt gear and target multiple species has been practiced for centuries expressing strong adaptive capacity and now moving towards vulnerability through adaptive constraint. The governance constraints of the CFP have created a form of fisher 'lock-in' which not only constrains the amount of fish that can be landed but limits the types of fish that can be landed, creating vulnerability. Pilchard fishing is a unique synthesis of heritage, contemporary fishing practice and tradition and is not merely a fundamental 'reinvention' of the pilchard. The practice combines traditional notions of fish consumption through the pilchard with modern fishing techniques and marketing techniques ([MFI-002](#)).

There is balancing act and trade-off between resource availability, governance and legislation, risk strategies in changing gear (e.g. ring netting), combined with escalating bureaucracy ([WGI-001](#)) and potential loss of right to fish through loss of track records. This balancing act also involves policy determination enforced through local, regional and national scales, leading to a multi-scalar, multi-

agency set of dependencies from a community fishing perspective. This level of complexity is critical in resilience terms through loss of agency at a local level coupled with the introduction of strict enforcement policies leading to criminal records for some fishers, some (very few) flaunting the law and some with little understanding of the governance process and the increasingly complex bureaucracy ([MFI-002](#); [VFI-003](#); [VFI-004](#); [WGI-001](#)).

Geographical location, topography, infrastructure, markets, local politics, transport links and logistical considerations influence the journey of fish from 'sea to plate'. Supply chain composition can have a dramatic influence on the profit taken by a fisher or group of fishers. Fig. 5-14 illustrates the complexity of contemporary community supply chains in a constant state of change. The impact of these logistical networks is important in understanding the vulnerabilities and resilience characteristics of individual communities and their fishers.

Fig. 5-14 shows that Mousehole distributes its fish to auction houses as well as locally. Polperro distributes only through auction houses, while the Mevagissey supply chain encompasses auction houses, local agents and licensed continental buyers directly loading from the dock to their refrigerated lorries. While Polperro and Mousehole could theoretically sell directly to the continent, it is likely that scales of economy play a major role in sales to France and Spain using refrigerated trucks, only evident in Mevagissey. Mevagissey historically utilised a co-operative to sell its fish but became bankrupt⁴⁰ in the 1980s. Fig. 5-14 depicts the sales networks adopted by the case study communities from 'net to plate'.

⁴⁰ There are various interview narratives of why the co-operative movement went bankrupt, from non-payment by supplied auction houses to financial mismanagement.

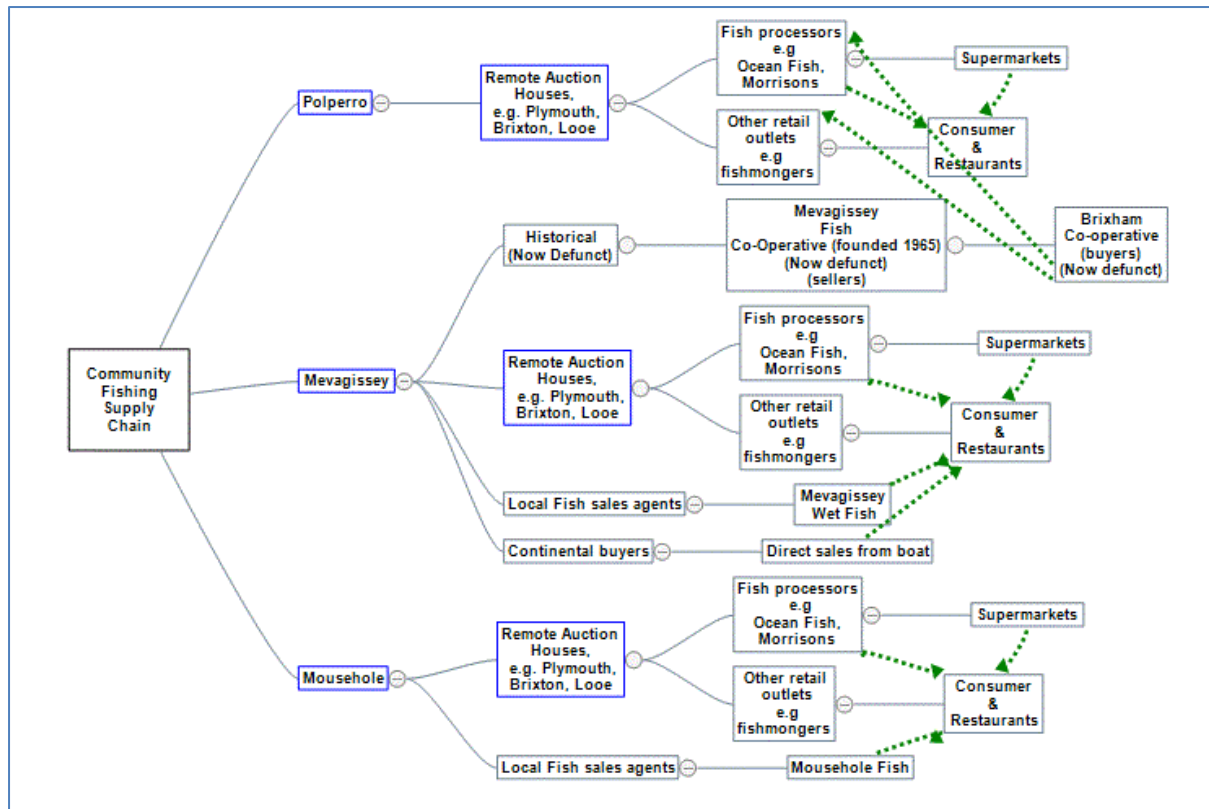


Figure 5-14 : Fishing community sales and supply networks - Source : (Author)

The case communities under consideration, based on the relative importance of community fishing have different logistical mixes and strategies for the fish's journey to the consumer, with varying levels of 'lock-in' and constraints.

For example, fish landed in Polperro, have to be transported by fork lift truck from the boats to the chilling unit on the quay. From there it has to be transported by forklift up the narrow confines of the harbour area (which has a general local ban on cars) about half a mile to the car park area for loading and dispatch to auction (Fig. 5-15). This presents some challenges, especially in the summer, when crowds block the streets making transport problematic.



Figure 5-15 : Polperro fish transit by fork-lift - Source : ([Author](#))

Mevagissey also has a fish and shellfish chilling facility. However, road vehicles can access the chilled store room relatively easy. Mousehole has no services for fishers (except for a small manual crane), fish are hoisted on this crane and dispatched to auction by the fishers' own small vans parked on the harbour wall directly above the fishing vessels. Thus, there are marked differences in how fish and shellfish are carried even on the first leg of their journey to the various auction houses, or other outlets. Once the fish have reached the auction houses, they may be sold locally or processed and distributed ([VGI-001](#)).

Fish landed into Mousehole were generally sold at the local fish auction house in Newlyn, unsurprising perhaps due its proximity to Mousehole (less than one mile) ([WGI-001](#)). Each leg of the supply chain outwards is a profit taking area for the

business element handling the fish and this can dramatically increase the price of the fish before it reaches the consumer. This is not unique to Mousehole. In Mousehole, one fisher remarked fishers take little profit ([MFI-011](#)). He commented that if he got £1.50 for a haddock, it might sell for £6 in auction and then £9 in a shop. The price increase factor of 600% down the supply chain prompted this comment :

“It’s the middle people who take the big slice in the supply chain.”

Mousehole Fisher ([MFI-011](#))

Fishers have taken initiatives to take a bigger ‘slice of the pie’ by adapting to direct sales and other options. The same Mousehole fisher stated he was considering selling his fish to the Plymouth Fisheries Auction House in order to extract more profit from his fishing operation as it is a Dutch auction⁴¹ and fishers generally get higher prices ([MFI-011](#)). He expressed that he felt constrained by the mechanism of fish sales in the Newlyn auction and was thus widening his options.

Initiatives to bring better value for the efforts of Mousehole fishers include the Mousehole fish sales outlet of Mousehole Fish ([MFC, 2015](#)). This company has created an opportunity to work directly with the small boat fishers of Mousehole, St. Ives and Cadgwith (local small community fishing ports) to bring more value to the consumer and the fishers, by taking out elements of the supply chain and providing more localised business. This is a ‘breakout’ from the ‘lock-in’ with the traditional Newlyn supply chain and is popular amongst some locals. Notably, there is a high use of mobile phone messaging to facilitate the logistics of collection and sale of fish in this business venture, an adaptive flexibility approach to contest issues of

⁴¹ Dutch auctions offer better prices for the seller (in this case the fisher).

empowerment and extant lock-in. Fishers have now become more aware of the options away from traditional auction houses available to them. The licensing of fish sales was a significant driver of a fisher lock-in to auction houses since the CFP was set up in 1970 ([PFI-001](#)). Fishers have now by diversified their sales outlets to other auction houses, or through agencies which have a right to handle and sell fish through their own licensing ([MFC, 2015](#)).

Fig 5-16 shows the day breaking on board the ‘sub-ten’ Mevagissey inshore boat ‘Demelza’ having left port at 4am and now sitting with the nets just dropped. The author requested the skipper to join the fishing trip when interviewing in the Mevagissey Social Club.



Figure 5-16 : Mevagissey inshore fishers – dawn at the fishing grounds - Source : ([Author](#))

Fishers in the ‘sub-ten’ sector tend to be self-employed for taxation reasons. However, opportunities for tax benefits exist and were adopted by one enterprising fisher in Mevagissey turning his ‘sub-ten’ vessel fishing operation into a limited company ([VGI-001](#)). What is not known, is how many other sub-ten fishers have adopted the vehicle of using a limited company and how it works in reality for fishers. Some co-operatives and fishing collectives across the UK and Cornwall, are clearly run as limited companies ([Cardwell, 2014](#)) but the business dynamics of single ‘sub-ten’ vessel fishing operations are less clear. It is also apparent that the ‘super-ten’ fleet utilises limited companies to a greater extent than the ‘sub-ten’ fleet, a view supported by the South West Fish Producers Organisation ([WBI-001](#)).

5.5 Fishing networks and succession

Fig. 5-17 illustrates some of the fishing networks that community fishers participate within, from the local, to the regional and to the national scale.

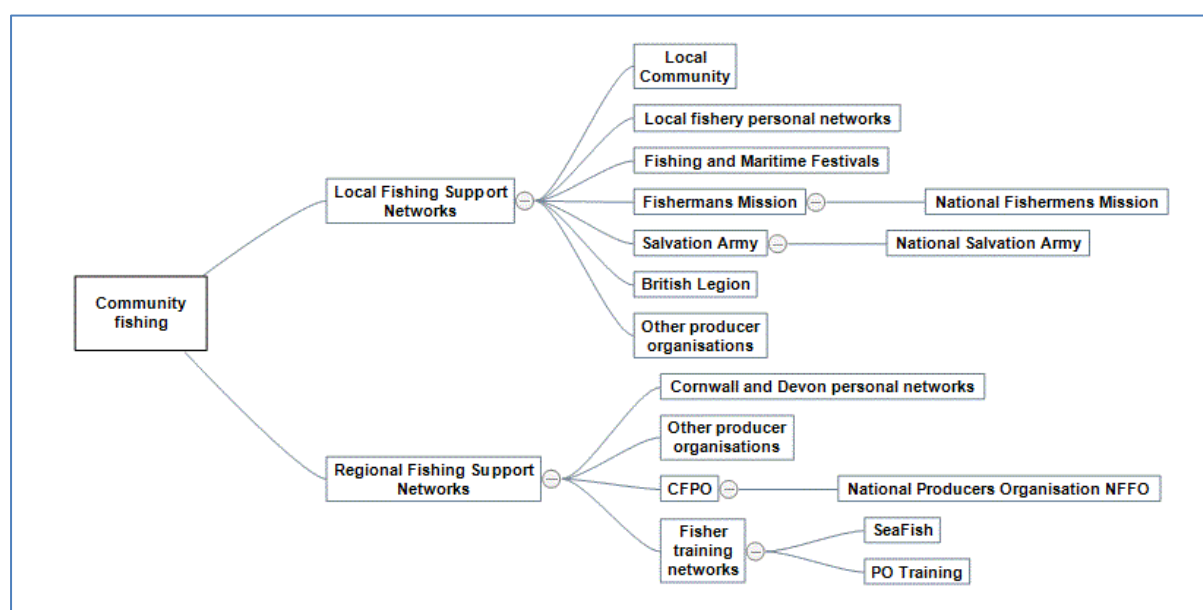


Figure 5-17 : Fishing support networks - Source : ([Author](#))

Commercial fishing operates over many different networks (Fig. 5-17), from legislation and governance networks through to local networks of fishers, and services and support groups over local, regional and international scales. Fishing personal networks are intrinsically informal, based on friendships, rivalry, fishing and the sea. They are spread widely and not constrained geographically. Fishers exchange information and personal 'banter' over VHF radio and mobile phones at sea, and have a tight camaraderie, even as commercial rivals. Survival at sea overrides all else, a perceived fishing rival may end up pulling you out of the water, fishers like all seafarers, live by the rules of the sea to depend on each other ([MRI-014](#)). Other support groups are shown in Fig. 5-17 and are important in the health, agency and representation of fishers and their families and understanding the social and business perspectives of fishing. Fishing is not 'business' framed in the business 'parlance' of modern terms for many fishermen, it is a way of life, an identity and a continuum of social and cultural life. However, modern notions of 'business' are slowly being imposing on the lives of fishers. There is a new thrust of 'business professionalism' and 'entrepreneurial imagery' among younger generation fishers ([Power, 2012](#)). This directly relates to earlier linear management discussions linked to a weakening of social resilience. These networks are also important in the operational aspects of fishing framing the community fishing constraints of governance and the supply chain. Governance is seen as heavy handed by 'sub-ten' fishers and 'bureaucratically loaded with red-tape' enforcing a significant administrative overhead.

Support networks are important to fishers. Commercial representation to governance bodies may be viewed as a support network in its own right through bodies such as the CFPO which represent and lobby the views of South West fishers

in Brussels at the EU CFP level. This CFPO spokesperson explains the concept of support networks for fishers :

“I guess we (the CFPO) are a support network as an organization to the fishing community and the NFFO as well. You could argue that legislation is in itself a support network to ensure the viability of the fleet, although the contrary could be said as well. The CFP is a support network as well through its social programme”

CFPO spokesperson ([WBI-001](#))

Fishers undertake a difficult and dangerous way of earning a living and participate in a way of life. Fishing is not purely a job in a modern sense. Fishing can be a strongly vocational life choice and, whilst intergenerational fishing in Cornish fishing villages was very much a norm in the 18th and 19th centuries, the same case cannot be assured in recent times. What is fairly assured though, is that if there are no local youngsters forming a succession line in commercial fishing, skills, knowledge and fishing culture will be lost ([Nuttall et al., 2005](#); [Smith & Jepson, 1993](#)), perhaps forever.

If there are no fishers to take on fishing in future generations, then fishing, as a community livelihood, is in jeopardy and vulnerable. This also requires consideration for the future rights of fishers to harvest fish and future generations of fish. This is a contested area in fishing management and the rights of fish through the ‘harm principle’, the ‘precautionary principle’ and the rights issues around the public commons ([Lam, 2012](#); [O’Riordan, 2004](#)). Collective decisions for fisheries are no longer in the domain of the community. This responsibility has moved to the realm of exogenous governance as has the ownership of larger boats as business assets (discussed further in Chapter 6).

The intake of young fishers into fishing is one of many constraining factors on the resilience of a fishing community to continue fishing by its local inhabitants. Table 5-2 tabulates the estimated numbers of young fishers (under 21) who are commercial fishers. There are no young fishers in Mousehole, one in Polperro (8% of FTE fishers) and six in Mevagissey (10% of FTE fishers). Other entrants into fishing may come from elsewhere but it is the skills transfer at the community level that is critical to conserved community knowledge. From these figures, Mousehole has little intergenerational succession prospects in regard to youngsters, while Polperro and Mevagissey have young entrants pursuing a fishing livelihood. Polperro has 8% of its FTE fishers under 21. This is just one fisher, having a disproportionate statistical impact.

There are no guarantees that these youngsters will continue fishing and no attrition data has been longitudinally collected to date, thus these data can only be used indicatively. To support this impending vulnerability, training organisations provide free training opportunities via the FLAG programme to encourage potential young fishers, such as those provided by SeaFish ([SeaFish, 2015a](#)).

Farming succession is a much researched topic in rural farming communities ([Brandth & Overrein, 2013](#); [Cassidy & McGrath, 2014](#); [Evans & Ilbery, 1996](#); [Fischer & Burton, 2014](#); [Haugen & Brandth, 2014](#); [Moreno-Pérez & Lobley, 2014](#); [Potter & Lobley, 1996](#)). Parallels can be drawn between farming and fishing succession as a series of endogenous succession cycles and not just comprised of such things as education, farm size, profitability and other metrics based criteria, but as a resilience or vulnerability building process ([Fischer & Burton, 2014](#)). Further, it is suggested that succession is predominantly a socially created phenomenon and that the key to succession lies in the development and maintenance of these cycles, and especially

the early engagement stage of child socialisation in farming ([Fischer & Burton ibid](#)). In rural farms, a warning flag has been raised with succession cycles ([ibid.](#)). Fishing communities may need to take notice and build on a socially created succession to support the future of fishing ([Fischer & Burton, 2014, p.434](#))

There are many other possible parallels as to why fisher succession is problematic in commercial fishing at the community level, some for reasons of economics and some from parental guidance, others are anti-social hours or, working remotely. Another significant factor is the escalating cost of housing in fishing communities compared to potential income from fishing discussed later in this chapter. The aforementioned early engagement of young people and early child socialisation may also be important in fishing succession. The CFPO are strong advocates of encouraging youngsters into fishing through educational programmes at schools and universities, which is a valuable way of getting fishing onto the educational agenda. An interview with the CFPO observes this issue clearly :

“In regard to young people coming into fishing I am instrumental in promoting youngsters through our educational initiatives. I took out a bunch of youngsters yesterday and try to express just how much hard work fishing really is and what it’s like to be at sea and take them out, obviously for their experience. So this hardness and hardship in relation to earnings is the important thing to communicate to youngsters. It will appeal to a certain sort of person and you will get a high attrition rate. Traditionally one son has taken over the business from his father and had a little punt to use in and out of the water and catch rock-fish and he will have been brought up fishing. It is less prevalent now that sons have this intergenerational knowledge transfer in contemporary fishing villages. Hardships are all part of the job whereas now there is a lot of bravado saying ‘I am really good at this’ but when they actually get on the boats it’s a different story completely. If you are used to manual work you might take easily to fishing, the others are probably not so likely to succeed.”

CFPO spokesperson ([WBI-001](#))

In Mousehole, the combination of the decline in fishing and reduced economic opportunities for youngsters prohibits youngsters in holding on to their place connection through fishing. However, the village is imbued with fishers and fishing residents who fish from nearby Newlyn so fishing exposure is not exclusively about local community fishing and is linked to exposure to fishing networks and the social elements of fishing.

Using quantitative questionnaire elements (combined with qualitative elements), residents were asked if they would encourage youngsters into commercial fishing. The community responses⁴² are displayed in Fig. 5-18. Mousehole has a trend towards strong encouragement, while Mevagissey has more of an emphasis on just encouragement. Mevagissey data expresses an interesting spread of views, with around 40% strongly encouraging, around 18% encouraging and then 33% disagreeing with 8% strongly disagreeing. Apart from around 10% disagreeing in Mevagissey, Polperro is the only community to express any strong disagreement with the encouragement of youngsters into fishing. The explanation for this is likely the commercial focus of Polperro that appears to favour modern commercial business practices.

⁴² Using ANOVA at the 95% CI.

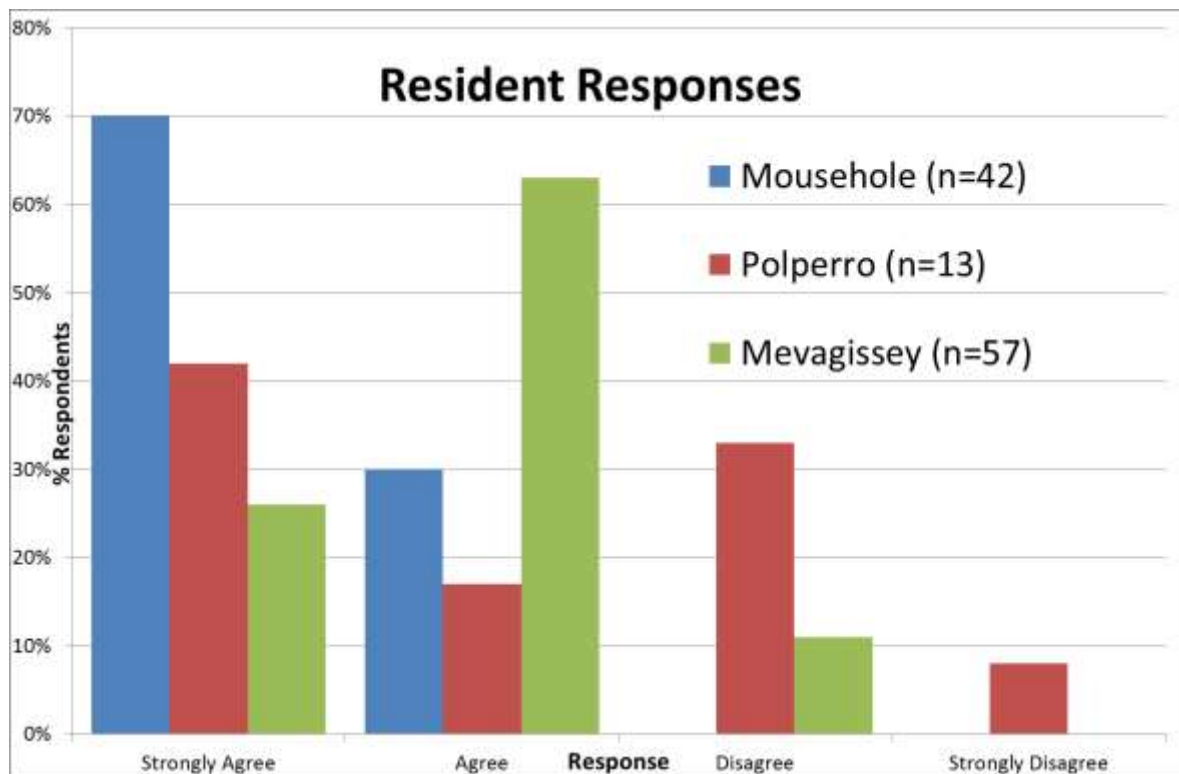


Figure 5-18 : Should youngsters be encouraged into fishing ? - Source : [Field data](#)

Results suggest that Mevagissey and Polperro demonstrate significantly divergent distribution, as does Mousehole and Mevagissey. This further suggests that Mousehole and Mevagissey are broadly supportive of young people coming into commercial fishing while Polperro is less supportive in relation to the other two communities. This view is also reflected in the graph in Fig. 5-18. Support for intergenerational fishing is a strong indicator of resilience in fishing communities and operations as discussed and suggests that Mevagissey has strong residential support in bringing through young people, as does Mousehole. Mousehole has a very small community of local fishers with no new young people coming into fishing whereas Mevagissey has a significant fishing operation with young people. The situation with Mousehole is that of a real vulnerability in fishing succession. There are no young fishers coming through who fish locally. However, there are young fishers residential in the community who actually fish from Mousehole's local

neighbour, Newlyn. Polperro has weaker support for intergenerational fishing from its residents, and, coupled with a count of only one young fisher, suggests that Polperro is vulnerable to a loss of intergenerational fishing as is Mousehole.

The possible loss of fishing skills through inter-generational discontinuity, or potential ruptures to the traditional and evolving pathways and traditions practiced for the last several centuries in Mevagissey, are an important factor in the resilience of fishing operations. There is strong field based evidence that youngsters are taking up the challenge of commercial fishing in Mevagissey, and sustaining the intergenerational skills of fishing as well as adopting new ones, such as ring-netting. Residents and businesses expressed the importance of young people continuing the fishing tradition :

“Migration of young people is an issue, from a fishing point of view, different types of people between small boats and deep-sea which have very effective fishing fleets.”

Mevagissey Harbour Authority ([VGI-002](#))

“You see future young fishermen developing from a very early age here.”

Mevagissey resident ([VRQ-7537](#))

One business person observes the threats to fishing in Mevagissey through housing costs, but is hopeful in the positive nature of youngsters going fishing :

“The community threat is house prices, the strength is young people going fishing.”

Mevagissey family business ([VBQ-7119](#))

Lack of community employment has led to the outmigration of some youngsters to university or jobs in other regions. Outmigration is not a new phenomenon in Mevagissey or indeed Cornwall, but the balance of fishers in Mevagissey and other fishing communities, from the field evidence, is moving towards a more elderly collective. This migration process has been encouraged by some families as well as the aspirations of youngsters ([VRQ-7611](#)).

There has been a drive from the Mevagissey Harbour Authority, through their Planning Strategy, to embrace intergenerational fishing for young people coming into fishing ([MHC, 2014](#)). Many residents mentioned this in the qualitative questionnaires as well as the more selective interviews in Mevagissey, suggesting that the strength of feeling runs deep into the community. The number of young fishers certainly reflects that there is a real energy in the uptake of young fishers.

The inter-generational mobility of labour has transitioned away from an effectively local labour force, with fishing being part of local pluriactivity based livelihoods, to the need for fishers and others in mobilising towards industrial fishing, heritage and tourism related employments. Thus, to observe that youngsters are actively taking up small-scale commercial fishing, with its inherent dangers, anti-social hours, and the weather and conditions associated with the livelihood, is encouraging to Mevagissey people and business alike. This contributes to the resilience of the community and the fishing efforts. This is not the case with the communities of Mousehole and Polperro.

Thus, there are many challenges to the drawing and retention of youngsters into fishing and the role of the community and harbour authorities are crucial to this succession process.

5.6 Fishing operations and gender

Across all the fishing communities under study, there is only one contemporary record of women fishers, situated in Mevagissey. Sparse data is available for female fisher representation at community level in this research although the question was raised routinely. The sole example of a female fisher in Mevagissey was from an interview and the respondent believed that the fisher was no longer actively fishing ([VFI-004](#)).

The role of women in fishing has always been critical in the case study fishing communities. Women, historically, were the matriarchs of the household traditionally while the men fished, and women processed fish and supplied equipment, food and drink to the fishers ([WBI-001](#)). The increasing burden of back-office work is often picked up by fishers' wives and partners. This can be a significant undertaking, and the increasing bureaucracy of fishing is usually taken up by women where there is a partnership. Women have received little credit from historians and researchers in their roles in fishing operations and this remains true in contemporary fishing ([Bennett, 2005, p.451](#)).

This 'invisibility' is further underpinned by a perceived lack of presence by women in management and governance in the fishing sector ([Tindall & Holvoet, 2008](#)). There are gender parallels to be drawn between fishing operations and farming ([Little, Ilbery & Watts, 2009](#)) and agri-tourism may empower women in terms of agricultural identity and farm identity ([Wright & Annes, 2014](#)). The concept of succession in farming and the traditional gender bias of male fishers as successors is also strongly reflected in agriculture along socially created lines ([Fischer & Burton, 2014](#)).

From a resilience perspective, the unseen work of women with the increasing burden of bureaucracy is a strong vulnerability. Bureaucracy has increased dramatically since the inception of the CFP in the 1970s and there is evidence to suggest this has a parallel to the manual labour role onshore by women in the 1800s and 1900s ([WBI-001](#)).

The increasing bureaucracy and the load placed onto women imposed on fishing operations by the MMO is creating an 'undesirable' community pathway in which significant invisible effort is undertaken, thus increasing the real cost of fishing and threatening resilience. Policy is not taking account of these efforts as the real cost of fishing and the denial of other work opportunities denied to many fishers partners.

Fishing operations are critical to fishing communities from many perspectives. There are many reasons why fishing has receded. In the case of Mousehole, it is primarily due to the infrastructure of neighbouring Newlyn providing better fishing access for vessels and associated services predating the CFP quota implementation. Mevagissey and Polperro have suffered the full impact of the CFP quota regime. From a community perspective, the influence of the CFP and European fishing (perspective) is indirect and subject to the ebb and flow of politics at a high level of governance from Europe. That is not to say that influence cannot be bought to bear on both UK politics through MPs and into Europe through MEPs and the CFPO/NFFO.

Fishing is 'sewn into' the fabric of fishing communities and the success of its associated businesses.

5.7 Conclusions

The aim of this chapter has been to assess and compare both historical and contemporary fishing activities in the case study fishing communities of Cornwall through their fleets, networks, fishing succession strength and gendered issues.

Key findings

1. The demise of fishing has affected the resilience of these communities through the implementation of the CFP, scope for coping strategies, changes to fish stocks linked to the CFP, environmental change, fishing harbour topology, and infrastructure enhancements.
2. Changes in fishing activities and perception have led to the marginalisation of fishing through issues of succession, depleted incomes through fishing and the 'unattractiveness' of fishing as a working environment.
3. Growth of the supply chain has effectively outsourced and displaced sales of fish away from fishing communities leading to diminished profit margins at the primary production fisher level.
4. The use of co-operative fishing may have failed in the sole example of Mevagissey. Nevertheless, the collaborative practices that remain from this phase has persisted and given Mevagissey flexible ideas and innovation.
5. The role of women is becoming increasingly important and women are effectively undertaking invisible and unpaid work in the fishing sector.

These key findings inform differential changes in dependency across the communities and the capacity of adaptation to adopt novel coping strategies ([Marshall, 2007b](#); [Marshall, 2007a](#)). Supporting work by Adger ([2000](#)) and Pelling and High ([2005](#)) in particular, also highlights how social resilience in these communities is impacted by adaptive capacity and environmental resource changes both directly through the environment and through exogenous governance.

The decline of community fishing activity is now almost total in Mousehole, and the question of resilience and vulnerability in its fishing operations is a moot point as Mousehole is now a 'virtual' fishing community ([Brookfield, 2005](#)). These issues are explored further in Chapter 8. In Mevagissey expansive fishing activities are strongly supported by the highly beneficial harbour infrastructure, local governance and a promising fishing succession. Polperro appears to be moving towards a 'virtual' fishing community identity and highly constrained by its 'space limited' harbour infrastructure and services along with a declining commercial economy and vulnerable fishing succession.

This discussion of the results on both historical and contemporary fishing activities in the case study fishing communities of Cornwall largely confirms findings by other studies on the resilience of fishing communities. In particular, parallels can be drawn with Brookfield's seminal study ([Brookfield, 2005](#)) on fisheries dependent communities with regard to the difficulties facing fishing communities and the benefit of community created coping strategies and how they are markedly different in each of the case study communities in this research. Brookfield's ([ibid.](#)) concept of a virtual fishing community is observed in the Mousehole community and, further, that a significant component of resilience has come through the 'marrying' of fishing to business diversification rather than treating each as independent entities.

Similarly, Marshall's incisive investigation ([Marshall, 2007a](#)) of declining fishing communities in Australia, highlighted several patterns similar to the case study communities in this study. For example a) how differential dependency on natural resources can compromise community adaptive capacity and b) why resource dependency runs much deeper than simple resource access and is embedded in communities on many scales with wide social implications discussed further in Chapter 7.

As highlighted in this chapter and in Chapter 4, fishing communities are not solely affected and shaped by activities related to fishing ([Acott, 2011](#); [Brookfield, 2005](#); [Hall-Arber, 2003](#); [Van Ginkel, 2009](#)). Modern 'fishing' communities are also engaged in many other economic activities, some indirectly linked to fishing, some not ([Urquhart, 2014](#)). It is the economic implications of fishing and other economic activities in these communities that frame the next chapter, building further on the changing face of community fishing activities assessed in this chapter.

It is the economic implications of fishing and other economic activities in these communities that frame the next chapter. This further builds on the changing face of community fishing activities discussed in this chapter.

6 Economic activities and resilience in the case study communities

6.1 Introduction

This chapter considers economic issues and drivers not directly connected to fishing activities. The aim of this chapter is to illustrate, contrast, analyse and evaluate the economic capital resilience and vulnerability factors that influence community resilience in the case communities. Building on this, this chapter will create an analytical view of drivers on community resilience and the impact of multi-scalar and multi-factorial connectivity influences linked to multiple perceived 'realities' at the community level as discussed in Chapter 1. Notions of a) typological resilience analysis using concepts of status, process and transformation, b) the utility of capitals and c) the validity of resilience for slow-onset analyses are discussed (also see Section 2.1). Slow-onset analyses can be framed in absorptive capacity (persistence), adaptive capacity (incremental adjustment) and transformational capacity (transformational responses) ([Béné, 2013](#); [Béné, Frankenberger & Nelson, 2015](#)). This chapter will also analyse the concepts of panarchy, multifunctionality and pluriactivity (see Chapter 2 and Section 6.7) to support a discussion of community resilience linked to economic capital. Economic capital in this context is that of 'assets' that can immediately and directly be convertible into money or institutionalized as property rights ([Bourdieu, 2008](#)).

Table 6-1 lists the typology topics, and the resilience themes and factors assessed in this chapter.

Section Topic	Themes, Resiliencies and Vulnerabilities
Section 6.2 : Business Services	Themes : glocalism, service/retail/academic sectors, public/private, parking services, seasonality, tumbleweed towns, service deserts, local business ownership, tourism, identity, heritage, autonomy, agency, technology
	Resiliencies and Vulnerabilities : glocalism, power configurations, seasonality, service deserts, local business ownership, tourism, identity, heritage, autonomy, agency, technology
Section 6.3 : Tourism and Resilience	Themes : Livelihoods
	Resiliencies and Vulnerabilities Scalar change, exogenous factors
Section 6.4 : Parking	Themes : Community services
	Resiliencies and Vulnerabilities : power configurations
Section 6.5 : Housing	Themes : Impact of second and holiday homes, gentrification, social housing, counter-urbanisation
	Resiliencies and Vulnerabilities : health, employment, housing, power configurations, exogenous power, social cohesion, fishing
Section 6.6 : Poverty	Themes : Deprivation, 'pocketed' poverty, visibility of poverty,
	Resiliencies and Vulnerabilities : health, confidence, employment, reciprocity, lock-in, exogenous influence
Section 6.7 : Multifunctionality and pluriactivity	Themes : Repurposing of infrastructure and vessels, changes in multifunctionalism and agency, diversity in livelihoods
	Resiliencies and Vulnerabilities : multifunctionality

Table 6-1 : Chapter 6, sections, themes and resilience factors - Source : ([Author](#))

This typology encompasses resilience factors framed in an economic capital (or domain) framework. This is important because community resilience changes in response to multi-factorial and multi-scalar social, economic, cultural and environmental drivers at the community level ([Wilson, 2010](#)).

The academic literature on rural community resilience suggests, for example, that economic factors such as holiday homes and second homes, ([Paris, 2008](#); [Willett, 2009](#)) gentrification ([Jacob, 2005a](#); [Jepson, 2007](#)), reductions in public services ([Wilson, 2010](#)), poverty ([Adger et al., 2002](#); [Béné & Friend, 2011](#); [Peluso,](#)

[1994](#); [Willett, 2009](#)) and both localism and globalisation ([Van Vliet, 2000](#); [Wilson, 2012b](#)) can drive social resilience and vulnerability in rural communities at many scales. To reiterate, a resilience factor (e.g. political lock-in) may be a desirable commodity to some members of a community. Conversely, it may constitute a threat or a vulnerability to other community members and may be manifested at (and between) many scales and other panarchies (or systems). This may suggest dependence and control external to a community which, again, may signify a resilience or vulnerability at the geographically constrained community scale ([Brown, 2014](#); [Wilson, 2012b](#)). Further, these influences may take place at different rates as fast and slow-onset change in one system (or level) may exert control over inception and rates of change in other panarchies or systems.

These threats (and benefits) are increasingly driven at (and between) ever wider scales and increasingly remote panarchies through globalisation effects (such as changing transport costs through oil price fluctuations). Other factors include business centralisation and aggregation (such as the growth and the economic-political lobbying power of multi-national corporations) ([Wilson, 2012b](#); [Wilson, 2013](#)). These exogenous institutions and factors can thus increase vulnerability at the community level through reduction in local coping capacity and loss of agency and direct influence on more localised systems (or in nested panarchies).

6.2 Business services

As discussed in Chapter 4, the manufacturing sector has declined dramatically in Cornwall over the last several decades as the primary resource extraction sector has slowly collapsed. Livelihoods have been transformed through this slow-onset

change to a (primarily) tertiary economy and communities have consequently suffered a loss of agency as well as reduced pluriactive options. Their economic survivability and their capacity to absorb and adapt was unable to cope adequately with global competition in tin and copper. These industries met their 'tipping points' along a trajectory of virtual extinction and communities suffered through a lack of alternate livelihood options away from mining. It is the service and retail industries, through tourism, that now dominate the economic landscape, utilising the backdrop of the rich heritage and environmental qualities and landscapes of Cornwall ([Willett, 2009](#)). The repurposing and re-use of this heritage through tourism can be viewed as a multifunctional adaptation across the Cornish region and at the community level. However, there are aspects of 'normatively' resilient multifunctional adoption that can create vulnerabilities as well as resilience as will be discussed in due course.

Localism factors, such as local sourcing, local ownership and local employment, play a significant role in community resilience ([Hopkins, 2008](#); [Wilson, 2012a](#)). From a status perspective, tensions exist between the autonomy of local and exogenous business, contrasting with power configurations exogenous to the community. Locally based ownership and investment are a key aspect of resilience with an increasing freedom from inter-patarchy, cross-scale and multi-factorial influence. Importantly exogenous factors such as these can reduce the absorptive and adaptive capacity in the face of shock at the local scale level where community agency is potentially more powerful and probably more informed but has declining agency due to external actors.

If business assets are not owned locally or financial capital is leaked from local business activities to remote ownership, this can lead to a vulnerability for communities in Cornwall e.g. holiday homes owned and managed by an owner in

London or New York ([Willett, 2009](#)). The degree of localism and exposure to globalism by businesses operating in the three case communities is important in assessing the degree of autonomy and self-organisation held by businesses as an expression of social resilience and independence ([Hopkins, 2008](#)). The gradual leakage of community assets such as business ownership, as a system disturbance, can take place over decadal timescales as slow-onset change and this is consequently a good example of slow-onset resilience change. Thus, the use of a status-based analysis can be limiting in understanding process and longitudinal change, and its possible trajectory towards transition (e.g. gated communities). Nevertheless, by adopting proxy and secondary data (through 'dynamic indicators' discussed later in this chapter), better informed perspectives are possible in further understanding slow-onset resilience change (see also Chapter 2).

Mousehole currently hosts a mixture of service businesses (restaurants, a pub, the British Legion and one hotel) along with retail businesses, a mix of tourist heritage based shops and art galleries, there are no charity shops. Mousehole is predominantly, if not totally, comprised of local businesses devoid of regional, national or international corporate ownership (with the arguable exception of the Post Office franchise). Mousehole is not (yet) subject to obvious exogenous control or suffering a loss of community business autonomy through reducing local ownership. This Mousehole business retail owner exemplifies his feelings towards 'chain' businesses and cites higher rents associated with the potential 'occupation' of Mousehole by exogenous businesses through their spending power :

“Business owners here are local. However, the major chains such as SeaSalt and others are only one step away from having a presence in places like Mousehole. They have much more spending power over a wide number of shops to make a permanent claim to a spot, and that will make the business rates even higher. We were lucky the teashop/cafe (premises) that has just opened up on the sea front harbour was not picked up by a major chain and glad to see a local business with local people taking on the building. There are no empty premises in Mousehole and this is presumably a function of demand and this is reflected in the high rents. The diversity of the businesses and the intrinsic competition hopefully keeps people like GAP and SeaSalt out.”⁴³

Mousehole Business Owner ([MBI-001](#))

These, often multi-national, businesses operating at a different regional and national scale are subject to very different cross-scale influence and power configurations e.g. taxation management, imports, oil prices, and international political drivers.

This quote ([ibid.](#)) invokes notions of wider corporate systems panarchies more closely linked with global supply chains bringing globalisation ever closer to the community along with the vulnerabilities and power configurations associated with these wider scales ([Woods, 2006](#)). This can also mean that the absorptive and adaptive capacity of communities degrade through ever closer proximity to global supply chains and systems. Importantly, fast changing exogenous global panarchies can very rapidly influence the community resilience through a lack of agency at these scales and remote global scale events ([Gotts, 2007](#)).

Private sector business pays business rates across the year, regardless of temporal peaks and troughs in turnover and lack of footfall in winter months. The interviewee continues :

⁴³ National ‘chain’ stores with a strong presence in Cornish coastal towns.

“... we still have to pay business rates and all of the overheads normally associated with a business across the whole year. If you look at the cash flow over a typical business year, you have to have a substantial buffer to manage the inter-seasonal lack of business. For businesses turning over £80k a year that is £16k of loss to rates.”

Mousehole retail shop owner : ([MBI-001](#))

Increasing rents and rates would further weaken the tenure of local businesses and promote economic vulnerability. This would likely move these businesses into (more) adaptive and possibly transformative (i.e. closing down) trajectories. This is an example of a slow onset force from a domination of local business ownership up to the post-war period when tourism arrived (also see Chapters 4 and 5). Tourism drove community livelihood adaptation processes, leading to transformational response from the loss of fishing and other pluriactive livelihoods (see Chapter 5). Other multiple factors drive livelihood options, such as increasing house prices and improved transport links. It is likely that Mousehole businesses are currently in an absorptive ‘state’ with risk of takeover of local business buildings by external and larger scale business concerns. This may steer some extant businesses towards closure, exposing their locally owned ‘business niches’ to the whims and spending power of exogenous business. Thus, Mousehole businesses may lose autonomy, agency and be more prone to remote panarchies and power configurations generating local vulnerabilities.

Aspirations to keep Mousehole businesses locally owned was iterated by other local businesses fearing loss of identity and increased competition in their niches ([McLean, 2006](#)). The maintenance of localism coupled to the absence of exogenous business interests are considered to be beneficial social resilience factors ([Hopkins, 2008](#); [Wilson, 2010](#)). The manufacturing business base (e.g. the

building of boats and infrastructure to support fishing), has vanished with the demise in fishing in Mousehole. Business autonomy and agency are largely retained within the community partially through the proximity principle⁴⁴ ([Ebbesen, Kjos & Konečni, 1976](#)) and the tight community ties in Mousehole (discussed in Chapter 7). These aspects of local agency form a strongly resilient economic trait in Mousehole. A flourishing Mousehole business was set up in the 1990s that manufactures high-technology sonar devices to deter cetaceans from entering trawl nets. This business was established by a returning local, repurposing part of a traditional established family home at the harbour front into this environmentally conscious business (a multifunctional approach). The business also has academic links with students and visiting academics and is a rare example of quaternary sector activities⁴⁵ directly embedded physically in the coastal case study communities. The Mousehole economy, therefore, constitutes a clear local community system or panarchy and is resilient for many reasons including adaptation to seasonality. Businesses in Mousehole also (currently) have strong self-organisational abilities.

In Mevagissey, there are many examples of national 'chain shops' such as 'SeaSalt', 'Fat Face' and 'Moshulu', as well as many regional shops such as 'Coastal Bridal Shop' and 'The Cornish Fudge Shop' and many locally owned shops. This implies that non-fishing business ownership and thus 'command and control' acts at multiple scales in Mevagissey from local, to regional to national and is a 'mixed scale' business economy. Self-organisation at the community level in Mevagissey is restricted to that of local businesses, although local employment conservation may happen through businesses owned at other scales. However, this makes local

⁴⁴ The tendency for individuals to form interpersonal relations with people who live or work close-by.

⁴⁵ Quaternary activities are discussed further in Chapter 8.

businesses more susceptible to these exogenous panarchies, power configurations, employment options and, at the widest scale, globalism.

Businesses in Polperro are almost exclusively locally owned with the exception of two holiday-lets offices. Nevertheless, the community has an extreme dependency on tourism in a similar way to Mousehole but with less adaptive capacity, especially in its response to seasonality. Polperro businesses suffer from seasonality issues far more than the other two communities and appear to have considered or demonstrated few adaptive options. Rigid community governance allows little 'space' for innovation and self-organisation within the community ([Pelling & Manuel-Navarrete, 2011](#)). This intensifies seasonally driven business vulnerability in Polperro (see also Chapters 5 and 6).

6.3 Tourism and resilience

The main tourism season in Cornwall is from Easter (April) to August, common to all three case communities. Seasonality plays a varying, but very important part in community economies. Seasonality is a key resilience indicator in respect of tourism dependency, linked to second homes and holiday homes.

Maritime heritage festivals, and their seasonal benefits to business season extension (discussed further in Chapter 7), are linked to private sector business prosperity and wider employment issues. Mousehole enjoys the 'Mousehole Lights Festival' over Christmas and into January preceded by the Tom Bawcock's Eve (and the famous Stargazy Pie) celebration over Christmas. This provides a localised and extended 'mini-season' of continued economic benefit for the community in the winter months, attracting visitors on a global basis. Mousehole also hosts one bi-annual maritime festival, the 'Sea, Salt and Sail' festival demonstrating a

commitment to heritage and further building absorptive capacity. This adopts a multifunctional use of the harbour areas, as do all festivals in the case communities. This resilient adaptation takes place on a local level but there is a strong dependence on tourists from regional, national and global scales. From an economic resilience perspective, Mousehole has a distinct economic strength bolstering the economy over the winter months providing winter continuity building economic absorptive capacity through service and retail sector employment. Festivals can also act as a resilience proxy over longitudinal and decadal timescales. This supports the thesis that resilience can be observed through slow-onset change bought about from regular events such as festivals ([Claesson, Robertson & Hall-Arber, 2005](#); [Derrett, 2002](#); [Derrett, 2003](#); [Jepson, 2015](#); [Rao, 2001](#); [Sharpe, 2008](#)). Festivals, along with seasonality views, provide a good base for proxy-based status observations indicating resilience on a cyclical basis for slow-onset change as 'dynamic indicators'.

The overall economic status in Polperro suggests vulnerability. In the era of post-fishing decline and tourism dependence, Polperro is a coastal community devoid of activity over the winter months, as are many others ([Hope, 2008](#); [Martindale, 2012](#); [McManus et al., 2012](#); [Wilson, 2010](#)). Polperro in winter is characterised by this resident :

“In the winter, it’s a tumbleweed town.”

Polperro B&B Owner ([PBI-003](#))

In Polperro, tourism ‘footfall’ numbers (a dominant economic indicator) have clearly dropped driven by the short tourist season, few entertainment options, the

cold and wet of the winter and the ‘infamous’ car park issue (see Section 6.4). Polperro demonstrates few adaptive options in economic terms to cope with these winter vulnerabilities. Polperro, from a seasonal economy perspective loses its absorptive capacity in the winter, and having low levels of adaptive capacity, is prone to a forced transformation (by traversing a tipping point or threshold) in resilience terms. This is likely to allow businesses from other economic scales or panarchies (such as remote ownership of holiday homes) to ‘buy up’ community businesses. The form this transformation might take is unknown, and transformation to a gated private community is not out of the question. Implications of this are discussed further in Chapter 8.

In Mevagissey, the impact of tourism is also characterised by an annual cyclical winter slow-down, business ‘failure’ and population changes coupled to fluxes in business :

“I feel that the village is being threatened as locals move away and properties bought as holiday lets. In the winter, the population falls dramatically. However, the village relies on the tourist industry, which itself has suffered due to bad weather over the past few years. The general economic climate is not good when shops are continually closing or struggling.”

Mevagissey B&B Owner : ([VRQ-2247](#))

This seasonal impact is further supported by this Mevagissey resident expressing the changes in income from the tourism based summer livelihoods to that of the winter, when people may turn to the state benefits system to survive :

“Many of the local shops are now totally tourist motivated and as this is only seasonal, it causes an area of ghost town quality in the winter months. The boom years of the 1960s and 1970s will probably never return due to the attraction of cheap foreign holidays, and the ease of foreign travel. However if the decline in visitor numbers is allowed to increase, then much of the economy of Mevagissey will decrease in proportion. There is a benefits culture⁴⁶ in the winter months.”

Mevagissey Resident ([VRQ-7576](#))

However, as an economic ‘counterbalance’ to seasonal impact in Mevagissey, the community has very strong fishing activities discussed in Chapter 5. This ‘underpins’ the economy throughout the year, especially during the winter and reinforces absorption capacity against economic impact. Limited livelihood options exist in neighbouring towns such as St Austell (which itself suffers severe economic deprivation).

Thus, tourism has differential effects within the three case communities and linked livelihoods are strongly dependent on seasonality. In resilience terms, different (or lack of) adaptive strategies to seasonal tourism have occurred. These perceptions of resilience are built-upon in the remaining sections of this chapter by utilising further examples of proxy data. Resilience analysis does not need to be either a) strictly status or b) a process cyclically sampled at set frequencies. A hybrid view is also appropriate as discussed in Chapters 2 and 3 viewing resilience through the lens of both observed status and proxy process views.

6.4 Parking

Parking is a critical resilience factor for tourists and residents alike in coastal communities, it featured strongly and unprompted within the interviews and

⁴⁶ Vernacular for residents drawing from UK Government state benefits .

questionnaires as a 'pan-community' issue from both business and residents. Parking influences congestion, access to local amenities such as doctor's surgeries for locals and the willingness for tourists to stop, feel relaxed, linger, and to spend more through local businesses. It is also a significant issue for hotels and B&Bs in attracting guests. Thus, it features as a strong infrastructure service supporting community resilience.

In Mevagissey, there were three large, private, main car parks and a small, metered section of short-term parking provided by the CCC. Short-term parking was £0.50 for half an hour, with many diverse local options up to around £6 a day. Some local business people still see parking as an issue :

"Car parking is the biggest single complaint by customers. This is both local and visitors."

Mevagissey business owner ([VBQ-7119](#))

In Polperro, there was only one option for parking which is operated by a remotely based business owner with a minimum charge of £4 for three hours with an £8 overnight fee, this is maintained even over the winter months thus having a continued and focussed impact on residents and a loss of local agency. There are no local resident concessions to e.g. visit the doctor or pick up local goods. The previous owner of the car park allowed concessions for local residents and businesses. There was a no-parking zone from this car park area all the way to the harbour-side around a half-mile away and no other parking options in the area. Parking in Polperro is thus a 'captive market' for the owner of the car park. There are no other options and this affects many business economy and social aspects of Polperro. This was a 'fast-onset' event and parking has thus become a 'locked-in' issue with a wide-ranging, multi-factorial and local impact. Visitors and locals are

subject to high parking fees with no competition, exposed to a singular, exogenous controlling power at a different scale and connectivity to that of the local community. Criticisms of a lack of concern for locals by the current remote owners were pronounced in the community. A Cornwall County Councillor added weight to the socio-economic vulnerability generated by the parking business :

“This is a big vulnerability in this village, the car park. The remote landowner wants his return on investment. Charges outside the main season is a real issue, a minimum of £4 for three hours, this does not work, visitors do not linger and this is a bad strategy for the community.”

Polperro and Cornish County Councillor ([VGI-002](#))

The CCC had the opportunity to bid for the car park prior to its sale in 2010 to the new private owner, but the CCC declined on economic grounds. This has had profound consequences to the village of Polperro creating a power configuration change that undermines the resilience of the community in many forms. However, from the perspective of the car park owner, this has provided a good business opportunity but provides little or no benefit to the community, and all income is ‘siphoned off’ to the outside of the community ‘sucking wealth’ out and further exacerbating the economic vulnerabilities of Polperro. The car park has also reduced the adaptive capacity of the community by enforcing a privately controlled ‘lock-in’ to this essential community service. Staff managing the car park are not from the locality, thus the Polperro community derives neither employment nor income from this business. From a panarchy perspective, the car park business ownership is now detached from the local panarchy. The car park now operates at a different scale but has cross-scale and cross-seasonal impact generating a dual vulnerability of parking

exacerbated by seasonality in Polperro. This quote indicates the huge volumes of tourists who once visited at around 20,000 daily in the 1960s :

“In Polperro, the car park is now on the flood plain. Surprise, surprise, water goes over the top of the metalled surface and floods the village, no chance of absorption. In the 1960s there were 20,000 daily visitors, this is now a summer monthly figure, so it is now about 20% of what it was. The pressure of economics has had an impact on the environment coupled with climate change. The floodwater has nowhere to go. Car park would kill the community with flooding. A huge diversion would have to be put into place with an outfall west of Polperro. We need to look long term at these flood issues, the village does not control these major assets as in the car park issue, we should take the pain now and offer £2-3 million for the car park, we should look ahead, we have a three to five year business plan in place when it should be 30. Identifying critical assets and then direct challenge is the way to go, it is not what is happening.”

Cornish County Councillor ([VGI-002](#))

This major issue of flood resilience in Polperro is believed to be caused by the creation of the metalled car park, preventing water retention in the water table and introducing a severe flood risk through pluvial surface water flooding ([UKGOV, 2015b](#)). This literal example of water absorption provides a good analogy of resilience, wherein the inability of a system to absorb change can strongly influence other aspects of a panarchy by creating system vulnerability through process change ([Berkes & Ross, 2016](#); [Garmestani, Allen & Cabezas, 2008](#); [Gotts, 2007](#); [Pelling & Manuel-Navarrete, 2011](#)). It also illustrates the environmental, economic and socially interconnected aspects of resilience. The absorptive thresholds of this system have been exceeded, the adaptive aspects of a system highlighted in their absence, and the community becomes vulnerable as a transformation in social, economic and environmental terms through these multiple implications of the car park ownership and metalling of the parking surface. This also highlights the use of capitals as a

hierarchy for a resilience 'lens', although the articulation of status-based and process-based perceptions of resilience may be better served through a different view. This serves as a forward discussion thread leading up to the implications and creation of the CRVI in Chapter 8.

This quote ([ibid.](#)) also illustrates the issue of constraints operating at a different, exogenous panarchy to the community, namely that of the CCC. Short-termism views at the CCC in 'strategic planning' weaken long-term investment benefits. The purchase of the car park as a valuable community asset would benefit Polperro resilience in multiple ways, providing employment, possibly local concessions and likely alleviate the pluvial flood issue through active water management. However, it would not guarantee parking fees would change but the community would have an opportunity to influence decision making, which is not the case at present. A panarchy view might envisage a slow and large stability phase (see Section 2.2) created by the theoretical purchase of the car park by the CCC. This might provide an institutionalised phase providing stability for parking for the community operating more empathically to the community interests. The Polperro community economy would still enjoy the freedom of local scales and dynamics whilst independently having the parking as an 'asset'. The car park operation is critical to the whole community and has created vulnerabilities for tourists, businesses and residents alike.

A further inference is that the imbalance and perceived dominance of business power over social agency (including this critical car park power issue) creates vulnerabilities in Polperro in both social and business terms. The process of a growing business impact can lead to power imbalances in communities coupled to the creation of community vulnerabilities e.g. traditions or sharing and learning are

lost from the community ([Hall-Arber, 2003](#)). In Polperro, it appears that there is a imbalance favouring business over social issues, this may lead to the loss of traditional culture which is, ironically, the principal 'wicked' factor that underpins tourism ([Willett, 2009](#)) discussed in Chapter 7.

Further, and critical to resilience, the Polperro car park issue has also led to a shift and loss of adaptive capacity, agency and power in the self-determination in local parking by this shift to both a different scale and a different external economically orientated panarchy residing completely outside of Polperro.

In Mousehole, there are three car parks, two are owned by the Mousehole Harbour Authority situated at either side of the quay. Parking rates on the quay are fixed at £3 a day and free in winter, all dues go directly to the maintenance of the harbour. Locally employed people run this local enterprise. A third, private car park, charges £5 a day and can accommodate coaches. There is also free parking on the road for 40-50 cars used by many locals that effectively provides free community parking, at least in the winter months. These harbour car parks arguably competitively influence the low fees of the other private car park. Parking issues did not figure in the Mousehole data, although congestion from the extremely narrow and sharp bends in the village did. Mousehole parking services can be interpreted as resilient through these community-orientated car parks, which retain parking fees locally and specifically to maintain the harbour infrastructure and thus completely operating at the local scale and within a local panarchy system. This is believed to have been started in the 1960s when tourism was adopted (and adapted towards) at an early stage by Mousehole (relative to the other case communities).

Mevagissey is the only community that has CCC metered parking and thus services local residents for brief time periods while providing longer term, affordable

parking for tourists through the private sector. Mevagissey expresses resilience in its parking services and practice, but it is the cost that creates vulnerability (although there is a 'healthy' diversity of parking option operated through local and regional scales).

6.5 Housing

Local residential access to housing is a critical issue in coastal communities (see Table 6-1). This provides community 'permanence' and the 'foundation' for important social networks further discussed in Chapter 7. There is a general oversupply of accommodation in Cornwall for substantial periods of the year ([Howard & Pinder, 2003](#)). Both holiday and second homes are thought to contribute to an uplift in house prices in rural and coastal communities ([ScotGov, 2005](#)) driving issues of local scale unaffordability. Holiday homes can be commercial or private concerns. In the context of this research, the term 'holiday homes' is adopted for commercial homes which are liable for business rates. The term 'second homes', is used to identify personal second homes which may be used for holidays or many other purposes and are commonly exogenously owned ([Gallent, 2007](#); [Pitkänen, Adamiak & Halseth, 2014](#); [Williams, 2016](#)). It is important to distinguish between these types of dwellings from two resilience perspectives, firstly from the social perspective discussed later in Chapter 7, and secondly from the economic perspective in this chapter.

Holiday homes may provide employment opportunities for local tradesmen, cleaners, and sales opportunities for retail and service businesses in the one or two week 'holiday cycle' as clients 'revolve out' after their brief stays. For example, one Mousehole fine art gallery owner explained that the presentation of new customers

every two weeks provided his business with a marked increase in sales, this was reflected by views from other businesses ([MBI-001](#)). These holiday properties require maintenance and local labour is often cheaper than 'importing' exogenous skilled tradespeople into the community. Second homes are thus, on this basis, unlikely to contribute beneficially to the livelihoods of a community to the same degree as holiday homes. This Mousehole resident comments on the proliferation of second homes and a growing feeling of isolation and loss of companionship in his community :

"I think there are only one of two locals who live here on the street now in that building opposite, it is really unstable and it would be really good do something about it, either sell it or repair it. All second home flats now in this road, next door is owned by remote owners who come here twice a year. Ten, yes, ten houses are not normally occupied out of fourteen. I am now living on my own in this street."

Mousehole resident ([MRI-001](#))

Second homes are problematic in definitional terms, spanning a spectrum from purely a second residence for an individual or a family to "... the point at overlap between housing and tourism" ([Paris, 2008, p.296](#)). Hence, they can be a 'dwelling away from home', a pure investment, a transitional 'dwelling away from home' for retirement, a place for friends to stay, or any combination of these and others across this spectrum.

The ability for residents and their offspring to buy into local housing is a perennial issue in coastal areas, especially those in environmentally attractive areas ([Cutter, 2000](#)), this has taken place on a slow-onset basis in Cornwall from the 1960s onwards slowly displacing businesses and residents alike. In Mevagissey, a

basic family house is around eleven times the average local annual income ([Forsyth, 2015](#)), while this factor is estimated at seventeen for Mousehole and fifteen for Polperro respectively. The notion of second homes is also considered problematic in its international and transnational context through definitional problems ([Paris, 2008](#)). Second homes, from an ownership position and the leakage of capital from the community to other scales and alternate panarchies are therefore important in this research.

The research definition adopted here frames second homes as personal, exogenously based property investments and not wholly occupied by a family or individual. This covers a wide spectrum of types of dwelling occupation. It is the reduced local permanent residential population and linked reduced opportunities for local tradespeople that were evident in the research findings.

The ability of an extant resident to afford a basic home is an important issue in the case communities. Analysis of case study community residential responses⁴⁷ to the statement “This fishing community has affordable property prices for local Cornish people” (see [Appendix C, Question B12](#)) suggested that there was a significant difference between Mevagissey and Mousehole. This further suggests that local residents think that housing is more affordable for locals in Mevagissey than Mousehole. This reflects that housing costs in Mousehole are significantly higher relative to Mevagissey. This also suggests that from an affordability basis and average income, Mousehole housing purchase access is a major obstacle for many locals. This may also suggest a predilection for an increase of more second and holiday homes in the community as locals become less able to afford housing. This is less of an issue for Polperro and somewhat less for Mevagissey from the data

⁴⁷ SPSS ANOVA CI=95%, Mousehole n=42, Polperro n=13, Mevagissey n=57.

presented. There is a very real issue on affordability for all three case communities in housing acquisition capability for many residents ([MBI-001; MFI-014](#)) and all the case communities are currently (as a status) vulnerable to potential incursion from second and holiday homes. CCC has proposed that holiday home growth is be constrained by 'change of use' planning permission⁴⁸.

Housing costs, second homes, holiday homes and social housing issues all aroused passionate responses from many residents, mostly in regards to the negative impacts on property prices, counter-urbanisation and the ability of youngsters to afford housing ([MBI-001; MFI-014](#)). This Mousehole resident comments on the impact of holiday and second homes and reflects on the ensuing social impact, cultural loss, slow-onset changes and a wider scale of societal issues :

"The changes to this community are irreversible due to the price of property and its unavailability to local people and families, either rented or owned. Local people are the first to admit this and sold all the cottages off when made a reasonable offer and moved out. Sadly with each local Mousehole born resident's demise, a vast amount of fascinating folk history is lost forever and inevitably another cottage becomes a second home or holiday home or holiday let and the pattern is the same throughout the country. That's a fact and the situation which cannot be changed regardless of surveys, public outrage, subsidies etc. it becomes acceptable because it is inevitable in a greedy capitalist society such as ours."

Mousehole Resident ([MRQ-284](#))

This suggests that housing costs have exceeded the threshold or capacity of many local residents to afford to get on the housing ladder, due to second and holiday homes purchases from outside the community. The timescales for this community transformation is decadal and is a slow-onset process supported by evidence from interviews, questionnaires and status-based housing data. The

⁴⁸ Discussed later in this chapter.

community impact through slow-change is difficult to observe and thus becomes important to illustrate effectively. Such community narratives are also important to highlight the (often) unique mixtures of resilience issues faced in some coastal communities.

Data was obtained from an FOI request to the Cornwall County Council ([CCC-FOI, 2013](#)), initiated at the commencement of this research, and ONS census data ([ONS, 2011a](#)) for the community sample zones (see Chapter 3). Using these data, the comparative numbers and relative percentage of commercial holiday homes, social housing and private primary and second homes in each community are depicted below (Fig. 6-1). Please note that holiday home numbers are purely indicative due to definitional and geographical area issues collecting commercial data (marked *** in Fig. 6-1) ([CCC-FOI, 2013](#)).

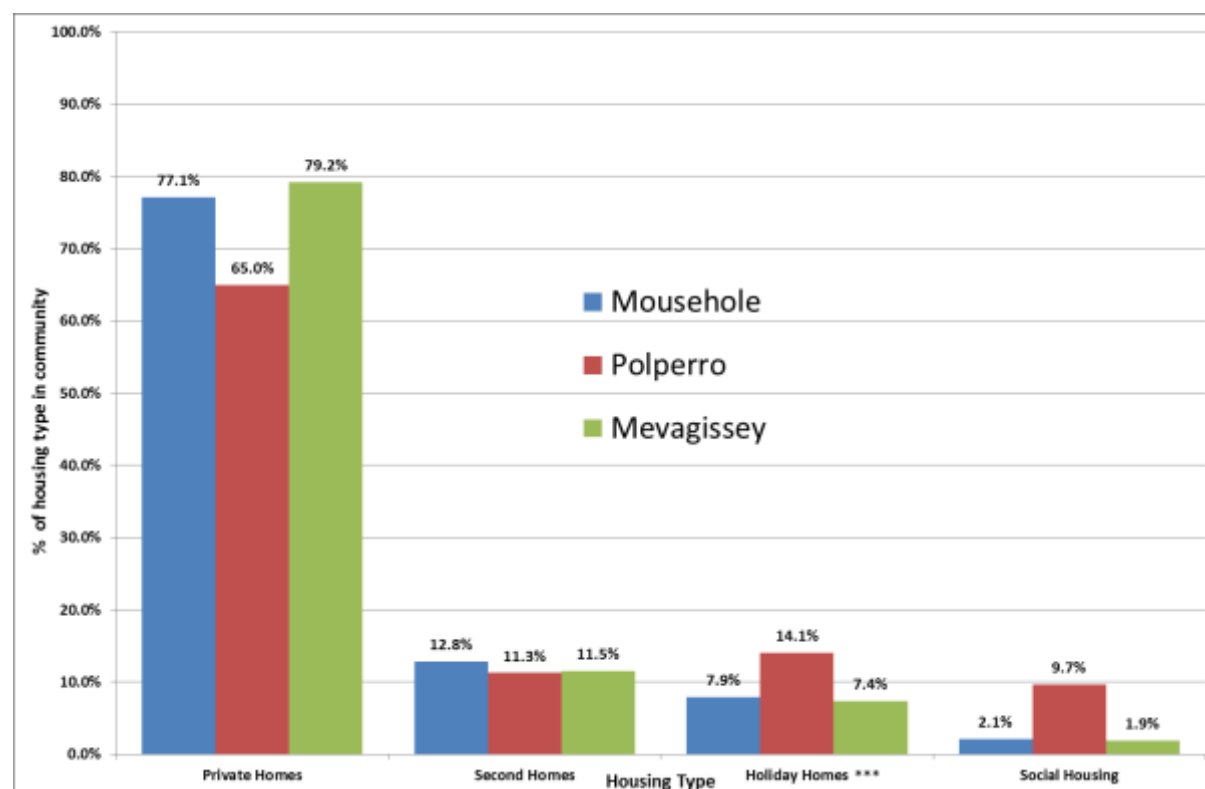


Figure 6-1 : Community housing types - Data source : ([CCC-FOI, 2013](#); [ONS, 2011a](#))

At 12.8% of the housing stock, Mousehole has a higher average proportion of second homes compared to the Cornish average of around 9% ([CCC, 2013](#)). However, in the harbour areas of the case communities, in Mousehole second home numbers increased to 22%, 19% for Polperro and 16% for Mevagissey using the census zone secondary data ([ONS, 2011a](#)).

Holiday homes tend to be concentrated within, or close to the harbour areas from observations of key safes,⁴⁹ marketing plaques and window stickers. Polperro was significant in the number of holiday homes in the harbour area that are likely much greater than the 14% indicated in this graph. A better estimate from observations is more likely to be at least 40%. Social housing in Polperro is a very significant 10% compared to far lower figures in the Mousehole and Mevagissey.

The density of these non-residential homes in harbour areas is critical to changes in the core residential community that have sustained social hubs in these areas (e.g. opportunities for fishers, artisans, and other habitual resident encounters). These social hubs are examined further in Chapter 7. Changes to community composition and outmigration are not wholly driven by exogenous factors. They can be driven by decisions of locals to take profit from their residencies moving to homes in less expensive areas, either upsizing or downsizing, or moving out to use profits as a retirement fund. Residential homeowners may re-mortgage to buy a cheaper and bigger home in the surrounding areas (e.g. Penzance/Newlyn) and rent out their old home in Mousehole ([MRI-008](#)). There are many combinations of reasons behind house sales. However, these 'one-off' transactions 'leak' financial assets (generally in one direction) out of the community, exacerbated by the transition of housing stock to non-residents and businesses who are not members of

⁴⁹ Key safes: combination lock safes containing keys mounted on house walls for renter access.

a permanent year-long 'core' business and residential community. This has created a generally diminishing core population in the case communities as adaptive livelihood options for locals become more limited and money, power and agency becomes ceded exogenously over decadal timescales. One Mousehole resident raises a key point about the escalation of housing prices by local distortion effects from second and holiday homes :

"Key challenges in Mousehole are the second home and holiday home issues which distorts the property market. I suspect it is a key factor in resilience."⁵⁰

Mevagissey resident ([MRQ-103](#))

Polperro exhibits a much higher incidence of holiday homes (than the other two case communities) at 14% (estimated really at 40%, also see Fig. 6-1). This signifies two dominant resilience issues, firstly, that income from these properties is likely to become channelled outside of the community, and secondly, that some community businesses may benefit from increased cyclical footfall from those renting holiday homes. Holiday homes are likely to be more beneficial to community livelihoods than second homes by providing maintenance employment, especially in the winter months when tourists are largely absent. In Polperro, exogenous contractors (who do not live in the community) who maintain holiday homes may deny local employment possibilities ([PRI-006](#)). The skewing of property prices on the local housing supply through second homes and holiday homes is similar in impact in line with research in Scotland ([ScotGov, 2005](#)).

Second homes in Cornwall have raised such concerns with the CCC, and legislation is in draft for a new 'change of use' clause through planning permissions

⁵⁰ The interviewee volunteered the term 'resilience' without prompting.

and is to be applied to potential holiday homes as previously mentioned ([CCC, 2013](#)). New build second homes have already been 'banned'⁵¹ in some communities in Cornwall. Thus, this is now become an option for all Cornwall communities. Studies have suggested that positive impacts of second and holiday homes include a contribution to the conservation of rural housing stock, bringing empty and redundant properties back into use ([CCC, 2013](#)). Property can be sold very quickly in Cornwall and at a very attractive price for sellers, and only a sole deserted property was observed in the three case study communities. This effectively nullifies this CCC initiative in these locations. Cornwall has also introduced a policy of charging a 150% council tax rate for properties which are left empty for more than two years, coupled with the removal of council tax discounts for second home owners ([Guardian, 2013](#)). This is a regional scale adaptive strategy to counter the expansion of second homes and stop the 'leaching' of assets and money out of the community. Further the money raised is intended to be used to build affordable homes although this money has not been 'ring-fenced' for this purpose (as many had hoped).

Mousehole, like many coastal areas in the South-West of the UK, is a very attractive place for people to buy homes ([Willett, 2009](#)) to use for part of the year or to rent out to others. Arguments against the incursion of second homes include the loss of services such as schools, libraries and post-offices, discussed further in Chapter 7. Second homes can thus 'suck the wealth' out of communities by remote ownership and the removal of contact with the community by owners of properties which are no longer family homes in the traditional village sense ([Farstad, 2013](#); [Gallent, 2007](#); [Paris, 2008](#)). This pushes communities to draw on adaptive capacity

⁵¹ For example, St Ives in Cornwall has now effectively banned new second homes by declaring that all new-builds are used as principal residences as part of its wider housing plan ([BBC, 2016b](#)).

that may be limited or absent, thus forcing communities to transform. This Mousehole resident proposes a higher council tax levy :

“I understand that 55%⁵² of village properties are second homes, I suggest that second homes pay four times the Council tax or more. 98%⁵³ of the fixed population would have agreed with this question.”

Mousehole resident ([MRQ-043](#))

Research suggests that the influence of second homes may only partially explain the inability of locals to afford local property ([Farstad, 2013](#); [Paris, 2008](#)). Slow-onset, and permanent in-migration, such as retirees and those seeking a change of lifestyle, needs to be factored in when considering affordability, although, in common with second and holiday homes, in-migration still ‘consumes’ local housing stock ([Paris, ibid.](#)). Of all of the case communities, affordable new builds have only taken place in Mevagissey ([VGI-002](#)) over the last decade. This does not bode well for the ‘housing resilience’ of local buyers in Polperro and Mevagissey. Low numbers of new builds, reduced availability of extant housing stock and basic unaffordability constrain local residential purchase and is a significant vulnerability in retaining the ‘social fabric’ of communities, fracturing these communities as a transformative process. This is discussed in more detail in Chapter 7

A reduced capacity for locals to afford and retain housing also plays a large part in the potential for gated communities to develop. This further marginalises the core population who are no longer able to cope with house prices, their economic absorptive capacity drained, and few options remaining to adapt. Gentrification inevitably changes the image and character of communities through the reshaping of

⁵² Data source unknown.

⁵³ Data source unknown.

community social memory and dynamics ([Clark, 2011](#); [Colburn & Jepson, 2012](#); [Freeman & Cheyne, 2012](#); [Paris, 2008](#); [Phillips, 2010](#)). As mentioned earlier in this chapter, it is ironic that the rural idyll qualities of a community that is the attractant for incoming buyers of fishing community property, is itself a prime agent of the loss of economic absorptive capacity of the 'core' community ([Willett, 2009](#)). This mirrors the 'wicked problems' discussed in Chapter 2 ([Ross, 2010](#)) where these 'attractant' qualities of coastal communities can drive a trajectory towards vulnerability for an indigenous community. A Mousehole resident laments on the perceived demise of her community :

"People can't afford it. It has gone beyond the pale really. I wouldn't be surprised if this village was gated in ten years. There is no hope for young families here, the majority of people coming to live here are an older people demographic, they are changing everything, there is never going to be a community here at all."

Mousehole retired resident ([MRI-001](#))

This resident expresses his feelings about potential loss of the social mix of the Mousehole community through second homes and gentrification, and its importance as social capital :

"The community should be a preserved community by continuing to enhance community ties or social capital and not through gentrification. The key is the eclectic richness of the residents: rich, poor, fishermen, shopkeepers, artists, mystics."

Mousehole resident ([MRQ-142](#)⁵⁴)

⁵⁴ This resident was familiar with resilience concepts as he was involved with the Transition Town movement.

Another important factor in Mousehole is the combined impact of second and holiday homes on the demographics of the area. While there is a significant emigration of residents, an influx of retirees and a boom in second homes, this creates a significant multi-factorial, slow-onset change in the relative numbers of 'core', or year-long residential community families with long term connections to the community.

This Mousehole resident makes some interesting remarks about this market commoditisation of family homes and the growth of second homes :

"The big changes came in the Thatcher years. Properties were suddenly seen by wealthy Londoners in particular as commercial opportunities rather than 'homes'. Suddenly, cottages were being bought up for next to nothing, done up, sold on, but not lived in. These people saw the houses not as places to live but as business opportunities. This has happened ever since, with the prices continuing to go up and up. Places are sold over and over again but never lived in full time. This has had a terrible effect on village life."

Mousehole resident (quotation from Western Morning News) ([WMN, 2012](#))

There is a suggestion of the cyclical based nature of housing change in this quote wherein former 'community' housing is increasingly exogenously owned by distant second home owners. This exogenous panarchy of second home owners may serve only to increase the market value and number of these properties as a remote system and does not benefit the local community. It also demonstrates how an external economic power configuration change can determine the core trajectory of the housing stock (and social life) in a coastal community.

There is an obvious anxiety in the Mousehole community with this shifting and transformative ownership of residential and business properties. This business owner summarised succinctly the general feelings of more established elements of the community of Mousehole :

“This is not a fishing community, it is a well favoured conglomeration of second homes and holiday ‘lets’ owned by individuals and businesses outside the country. This is not an attractive long term proposition.”

Mousehole retail business owner ([MBI-001](#))

The general ‘Disneyfication’ of heritage in Cornwall discussed in Chapter 4 has had an impact on second homes and holiday home increases in recent years. This forms an important bridge in Mousehole, between the marketing of heritage and perhaps, its assured degradation in the same breath. Cornwall tourism promotes tourism as a vital economical factor in Cornwall. This may continue to lead to it becoming the playground of the wealthy and not the working environment of the less well off ([Kennedy & Kingcome, 1998](#); [Willett, 2009](#)). This phenomenon constitutes an overarching aspect of transformation at the regional level into a heritage-based economy. Mousehole is perhaps a ‘victim’ of the transition in the re-invention of Cornish culture under neo-liberal business initiatives.

In Mousehole, increased tourism, diminishing community agency and reduced pluriactive working will likely convert the community into a completely service industry dominated community. This will degrade aspects of resilience e.g. employment, collaboration, self-efficacy, and diverse social networks. This does not promise much for the working people of Mousehole through its pathway of tourism adoption and lack of employment options (degraded pluriactivity). The imagery of Cornwall, and especially fishing communities, is a strong attractant to tourism :

“Mass tourism and commoditised heritage dominate the scene, if not the economy, and thousands of new residents have been drawn there by this imagery.”

([Kennedy & Kingcome, 1998](#))

Locals expressed, sometimes with obvious exasperation, the changes to the community and the impact of the 'Disneyfication' parody. However, it is important to note that many new residents commit a great deal to community life :

"It is with great sadness that I, after 70 years must concede that the place I grew up in no longer exists. Some incomers have contributed a great deal to the village but the fishing community died because of the economic conditions. Now it is a parody of what it was and exploited by holiday home owners."

Mousehole Resident ([MRQ-246](#))

Research has shown that when levels of second home ownership rises there is a proportionate increase in average house prices ([Wallace et al., 2005](#)). The rationale is that second home owners are unlikely to be attracted to low value housing, and that housing prices in higher value areas are pushed up by the higher budgets of affluent second home buyers in a 'self-propelled' trajectory, to the detriment of local affordability. This is a wave of slow-onset processes moving in only one direction. This retired fisher pointedly responded to questions about house prices in Mousehole :

"A hundred grand⁵⁵ wouldn't buy the front door now."

Mousehole retired fisherman ([MRI-014](#))

Another Mousehole resident offered a summary of the plight being faced by many young families and the developing demographic gap :

⁵⁵ 'Grand' is vernacular for a thousand UK pounds.

“The death toll of the village of Mousehole is in the hands of the authorities. While there is no check on the second homes, there will not be any homes in the village for young couples to rent or buy. The future must assure that young couples are encouraged to buy or rent into the village, we are now becoming the village of old or retired people, the writing is on the wall. I just hope someone can act before it is too late can stop the damage, and adopt a broad plan to restrict the sale of occupancy of houses for the use of young families.”

Mousehole Resident ([MRQ-304](#))

Research suggest that second homes are causal drivers of local social issues ([Paris, 2008](#)) and this quote expresses a clear concern and worry about ‘rural gentrification’ in Mousehole. Context is critical in this assessment when observing the loss of benefit to members of the community. Research suggests that the growth of second homes is not in the general community interest and brings about unwanted changes through a perceived reduction in services and contribution both to the economy and the social good ([Gallent, 2007](#); [Paris, 2008](#); [Pitkänen, Adamiak & Halseth, 2014](#); [Williams, 2016](#)).

This is not a universal critique of all owners of second homes, many of this group actively contribute to the community in many ways which will be examined in the next chapter. However, much of the income of holiday homes never registers in the local economy as discussed (and even second home maintenance in Polperro). This situation is thus perceived to provide little benefit to the community in socio-economic terms. Willett ([2009](#)) discusses reasons for purchasing property in fishing communities, driven by its inherent cultural and identity values. The rational to buy in these communities is strangely at odds with the reality of the consequences of doing so in many cases, evidenced through the many ‘ghost towns’ in Cornwall, and ‘vetoing’ influence and threats by newcomers to social housing planning initiatives.

This further supports a view of a trajectory of transformation of coastal communities towards non-local ownership and gentrification.

This shift to both a different scale and a different external home ownership panarchy (or multiple panarchies) means that much of the housing stock ownership resides completely outside of the case study communities in general (and especially in the instance of Polperro). Many community residents have become disenfranchised through housing affordability and a loss of hope in many cases to ever get on the local 'housing ladder'. Residents also vented their anger in many interviews to the 'invisible' buyers sucking the wealth from their communities and putting nothing back in. Others expressed resignation and submission to the events that have happened slowly over many years but certainly not 'invisible' to the community.

A further consequence of second home and holiday home expansion is often a reduction in services for the remaining extant, and reduced, permanent population ([Oram, 2002](#)). Homes that stand empty can undermine the sustainability and long term social resilience or 'social fabric' of a community ([Hall-Arber, 2003](#)), a fact that has been recognised by Cornwall County Council in removing the so called 'subsidy' for council tax for second homes in 2014 as previously discussed ([CCC, 2013](#)).

Mevagissey, like many communities, has undergone (and is undergoing), a process of in-migration and out-migration. Data collected from residential interviews and questionnaires in Mevagissey suggest that there is a large majority of people averse to the rise of holiday homes and second home in Mevagissey for a variety of reasons. This resident's disdain is evident in regard to second and holiday homes :

“I hate them. They destroy communities. I live in a road of 19 properties and only seven are lived in. When they are here for holidays they have no respect for residents.”

Mevagissey resident ([VRQ-7489](#))

This business focussed Mevagissey resident feels differently. One person's vulnerability is another's resilience :

“Thankfully the village is not overrun with holiday homes like some other places in Cornwall. This is because of its status as a working fishing village. The holiday and second homes that are here seem to be regularly occupied with either the owners or let out.”

Mevagissey business owner ([VBQ-7118](#))

Affordable homes in Mevagissey remain problematic for a community which houses the crews and skippers of around 63 working fishing boats. This Mevagissey business person remarked :

“With a large number of these second home properties it is very difficult for locals to buy or rent as the prices are very expensive. There is just not enough affordable housing for locals”

Mevagissey harbour-side business owner ([VBQ-7116](#))

Mevagissey has recently managed to build some affordable housing, keeping some local fishers firmly housed in the community. Shipbuilder Close on Vicarage Hill was built at a cost of £2m providing 14 families with homes under the shared ownership scheme ([Cornish Guardian, 2012a](#)), ten of which are fishing families. This adaptive achievement was undertaken between Mevagissey Parish Council and

Ocean Housing and is a valuable asset for the community effectively supporting the fishing tradition of Mevagissey and intergenerational heritage retention. This is a positive resilience trait. A further social housing initiative was approved in Mevagissey in 2014 after a sanguine battle between new residents and proposers.

No evidence for the building of new affordable housing was observed for the last decade in Polperro and Mousehole. Of the three communities, it was only Mevagissey that was to show its real interest in building to retain local community and fishers ([Cornish Guardian, 2012a](#)). This was achieved by a powerful expression of agency and determination by the town council and residents to overcome opposition to social housing by house owners⁵⁶. Factors that influence social housing are not confined to economic issues, power configurations play a major part in affordable housing programs, as well as self-interest. It is often local power and wealth configurations, newcomers and or second home owner opposition that slow or prevent affordable housing programme delivery ([Cornishman, 2014b](#); [Davison et al., 2016](#); [WestBriton, 2010](#)). This demonstrates the impact of 'neo-residents' and exogenous ownership in community wellbeing associated with the fluxes and polarisation of power configuration change. The Coastline Housing Association in Cornwall, further criticises the resistance of some communities in preventing these programmes from delivering :

⁵⁶ Many of these house owners were believed to be second home owners from local discussions but no empirical data was available to support this.

“Developments regularly face local opposition, and often from people who hold significant positions within local communities, parish, town or county councillors, who can make it difficult for the voices of the most vulnerable and those in housing needs to be heard. Those who object usually have money and influence and use this to stall or, in the worst cases, stop much-needed affordable housing developments from going ahead.”

([Guardian, 2012b, p.2](#))

These actors, along with planning consent issues for AONBs⁵⁷ form constraints on housing for those in most need in coastal communities in Cornwall, and especially in the case communities of Polperro and Mousehole.

6.6 Poverty

Poverty, as discussed in Chapter 4, is deeply entrenched in many parts of Cornwall, a popular view being that it is most prominent in the central regions. Yet, coastal fishing communities have long been associated with low income and this has been linked with resource availability issues as drivers of poverty ([Marshall, 2007a](#)). It is likely that many institutional mechanisms have driven embedded and maintained aspects of poverty that may persist long after fishing has declined in communities. Poverty is viewed as a slow-onset process in Cornwall and the slide into poverty (and the persistence of poverty) has affected individuals and families across generations through multiple governments who have implemented development programmes for Cornwall ([Mumford, 2014](#); [Williams, 2008](#)). Critically, it will be an equally slow process to extract itself from poverty ([Willett, 2009](#)).

Poverty factors can be multi-factorial and multi-scalar :

⁵⁷ AONB - Area of Outstanding Natural Beauty.

“Poverty in fishing communities often relates to a wide range of socio-institutional factors other than income, including, land ownership, debt, access to health, education and financial capital, and marginalisation from political decision making.”

([Béné & Friend, 2011, p.118](#))

The ‘institutional absence of listening’ to the ‘insider’ Cornish population has been at least partially blamed on the perceived failures of decadal cycles of development programmes intended to reduce poverty driven vulnerability in Cornwall ([Willett, 2009](#)). Cornwall has historically suffered from poverty over long-term, century level scales, and yet poverty has still persisted and continues to contribute to vulnerability. Since the 1960s, Cornwall has experienced one of the highest levels of in-migration of any county in Britain. Migrants are mostly of working age and economically active, yet large-scale in-migration has been associated with a declining economy since in-migration commenced in earnest in the 1960s ([Williams, 2008](#)). The multi-factorial and multi-scalar economic processes such as tourism may have benefitted some people’s economic resilience. However, these factors have also generated vulnerabilities such as housing affordability, in-migration and out-migration and have not weakened the underlying poverty of Cornwall. It is important to understand the factors that have led to the process of retention of poverty over the last 50 years that has led to the current picture of poverty in Cornwall, and specifically poverty in the case study communities.

In Cornwall, social deprivation data extracted from the 2010 UK census demonstrates pronounced levels of deprivation through status-based poverty factor assessments ([IMD, 2010](#)). Table 6-2 illustrates some of these factors. In rough terms, Polperro is in the most deprived 24% of vulnerable communities nationally

measured with this index, whilst Mousehole is in the most deprived 34% and Mevagissey 30% respectively. Polperro's worst deprivation figures (minimum) are within the most deprived 10% of the UK, Mousehole within the most deprived 16% and Mevagissey 12% respectively. This may be surprising for many people when considering the public image of Cornwall being a beautiful and wealthy region. Cornish poverty is still very much a major social and economic issue.

Community	IMD Rank % Min	IMD Rank % Max	IMD Rank % Average	IMD Rank Range
Polperro	10.3%	37.7%	24.0%	27.3%
Mousehole	16.6%	51.7%	34.1%	35.1%
Mevagissey	12.3%	47.7%	30.0%	35.4%

Table 6-2 : Indices of Multiple Deprivation - Data Source : ([IMD, 2010](#))

Closer examination of these data using community-ranking is illustrated in Table 6-3. The lower the percentage figure, the more vulnerable the community is prone to this factor, relative to the whole of the UK. Significant deprivation factors are the barrier to services and both indoor and outdoor living environments in Polperro. In Mevagissey, it is barriers to services, employment and housing that denote vulnerability. The indoor and outdoor living environments are also vulnerabilities in Mevagissey. In Mousehole, the most apparent vulnerabilities are indoor and outdoor living environments.

Community	Index of Multiple Deprivation (IMD)	Young People Education	Skills and Training	Employment	Barriers to Services	Health and Disability	Income Deprivation Affecting Younger People	Income Deprivation Affecting Older People	Income	Indoors Living Environment	Outdoors Living Environment	Skills	Wider Barriers to Housing
Polperro	24.0%	23.0%	30.0%	15.5%	2.7%	26.2%	9.6%	26.3%	20.7%	0.9%	1.5%	31.2%	13.8%
Mousehole	34.1%	32.8%	44.7%	13.5%	20.5%	14.9%	9.2%	36.4%	19.5%	0.6%	1.9%	42.1%	10.4%
Mevagissey	30.0%	18.4%	32.7%	7.3%	5.6%	5.2%	14.3%	28.8%	18.0%	0.3%	1.6%	35.8%	0.8%

Table 6-3 : Index factors of Multiple Deprivation - Data Source : ([IMD, 2010](#))

Inside and outside living poverty is highly visible across all the communities (see Table 6-3). The most extreme vulnerability factor is that of Mevagissey which is in the most vulnerable 0.3% of the UK for living conditions indoors. Observations of the data do not suggest a particular typology of area where poverty is more likely to exist. However, poverty is much less likely to exist in the harbour areas due to escalated housing prices. Polperro has a high proportion of social housing, estimated at around 10% of the housing stock (see Fig. 6-1), concentrated in Carey Park and Highfields on the margins of the community linked with high multiple deprivation indices (see also Tables 6-2 and 6-3).

It has been suggested that it is not a lack of resource which drives poverty in coastal fishing communities, but the influence of long term and persistent socio-economic pressures deriving from institutions coupled with commercial free market pressures ([Béné, 2003](#); [Béné & Friend, 2011](#)). Poverty may be hidden by other demographic data and not isolated to the obviously badly deprived areas such as inland Camborne, Pool and Redruth ([Guardian, 2013](#); [Mumford, 2014](#)). Poverty appears to be embedded and real within these coastal 'honeypot communities', although not as visually obvious as in other areas of poverty in Cornwall. In resilience terms, this also supports the assertion that 'pockets' of poverty exists in the coastal case communities and not just the central 'belt' of Cornwall.

Poverty may also be a product of marginalisation ([Béné, 2003](#)). Social vulnerability is not distributed evenly across an individual community. Indeed it is the core harbour village area that expresses the least poverty on observing the types of sub-community tested, perhaps not a surprise for tourism heritage areas. Poverty is practically invisible to the tourist eye in these communities, as poorer areas may have been 'hidden' through planning initiatives, arguably in deference to the tourism

industry. This ‘pocketing’ of poverty also develops zones of vulnerability, and while poverty sometimes brings desperate people together in zones of adversity ([Rajkumar, Premkumar & Tharyan, 2008](#)), there was no evidence of this happening from field work observations.

Resilience concepts such as absorption, adaptation and transformation are useful in assessing how the case study communities have coped with slow onset resilience change through such processes such as out-migration, in-migration, marginalisation and housing affordability (changes discussed earlier in this chapter). This process approach is useful in combination with status-based analyses such as these deprivation indices (see Tables 6-2 and 6-3) discussed more in the CRVI typology in Chapter 8.

6.7 Multifunctionality and pluriactivity

The ability of a community to cope with negative aspects of change is linked to its mix of pluriactive livelihoods ([Wilson, 2010](#)), an attribute that Cornwall has historically adopted successfully as an adaptation to need. A single industry such as tourism, in itself, may actually create a single point of vulnerability in communities where livelihoods are predominantly dependent on heritage tourism after experiencing reduced pluriactivity. This implies a reduced adaptive capacity may drive a trajectory towards transformation in resilience terms. Further, constraints imposed on communities through e.g. legislation, ‘locked-in’ livelihoods and power issues build on these vulnerabilities, further discussed in Chapter 7.

Businesses form a significant part of the economic landscape of fishing communities and fishing is still a key influence on other businesses in some coastal

communities. This Mevagissey business owner comments on the wider impacts of fishing :

“Fishing in Mevagissey generates income to sustain a variety of businesses, as opposed to just the tourism industry.”

Mevagissey Business Owner ([VBQ-7119](#))

Significantly, diversity in livelihoods has reduced over the past century with a divergent pathway from those associated with primary resource extraction and the services needed to support them. This is likely to have a significant influence on the community composition when observed through a livelihood lens. This retired fisher observes the pluriactivity of fishing communities today in tertiary service sector employments :

“In past times community members have been able to have many livelihoods in various ways such as fishing, quarrying, market gardening and mining. There are many good examples of people who do multiple jobs e.g. ‘Fisher A’ who fishes in the summer and is also a logger in the winter. Some others do building and painting and go back fishing in the summer. They always go back fishing if they can. Also, there are electricians, builders, deliverymen some deliveryman are fishers. They do all sorts.”

Retired Mousehole fisher ([MRI-001](#))

It can be argued that holiday homes contribute to pluriactivity in the case communities through service sector employment and that livelihoods have transitioned from primary resource pluriactive roles. Examples of contemporary adaptive capacity in the case communities included that of multifunctionality ([Wilson, 2010](#)) through repurposing fishing vessels in the summer season thus also retaining

local scale ownership, employment and a degree of ‘protection’ from external panarchies. Mevagissey and Polperro fleet fishers achieved this by utilising their vessels for eco-tourism whilst they were not undergoing fishing activities. Tourist shark fishing trips (not commercial fishing) were undertaken on commercial fishing vessels from Mousehole before the practice was banned in the 1970s ([MRQ-009](#)), and for which Mevagissey was famous ([VRI-005](#)). Around six skippers utilise Mevagissey harbour facilities to take paying passengers on eco-tours on their fishing boats to augment their fishing revenues (see Fig. 6-2), with around four in Polperro. These boats must pass stringent MMO inspections and (sometimes) expensive safety enhancements and liability insurances. This requires investment from the skippers as well as ‘normal’ inspection and governance as operating fishing boats ([WBI-001](#)).



Figure 6-2 : Mevagissey eco-tourism from working fishing boats - Source : ([Author](#)),

Leisure vessels and the ubiquitous Cornish activity of crabbing on the quay wall (in background) are also shown in Fig. 6-2. In the foreground, eco-tour advertising on the cabin of the fishing boat 'Liberty' can be seen, along with a queue of people waiting to board for the next trip.

One of the advantages of this type of adaptation is that skippers can share their vessels with other skippers for eco-tours when they are unavailable to personally fish or conduct their trips, thus further expanding and utilising the vessel 'duality'. This is a further 'draw' for tourists wishing to observe the marine environment, providing more than just income from the actual vessel repurposing. This type of utilisation does not detract from the original purpose of the operation, of fishing in this case, but augments the use of the resource in a positive and resilient way.

This multifunctional approach increases the operational resilience of the fleet by 'repurposing' the fishing boats, the 'lending' of boats to other fishers and expresses adaptive flexibility to limitations and pressures on the operational absorptive capacity of fishers through e.g. fishing quotas and weather. In Mousehole unlike Mevagissey and Polperro, commercial fishing moved to Newlyn in the 1960s when both absorptive and adaptive capacity thresholds or fishing were surpassed and transition ensued entailing the 'exodus' of the fishing fleet. This was, as discussed earlier, a clearly identifiable fast-onset resilience event unlike the slower onset of fishing decline in Polperro moving towards transition and the adaptive maintenance of fishing activities in Mevagissey (involving multi-million UK pound EU funding).

Multifunctional activity can be interpreted as an expression of resilience by utilising assets such as fishing vessels discussed earlier, this can enhance the resilience of a community (and individuals) through utilising these assets in multiple ways getting 'more' out of an asset such as a fishing boat. Moreover, it is something

that requires little ongoing investment, achieved using local agency with boats owned by local people, keeping income a local scale, and all taking place at the community scale. These are beneficial factors for resilient behaviour ([Wilson, 2010](#)).

In Mevagissey, the MAC leisure centre exhibits multifunctional usage. This has a different multifunctional focus than the example of fishing boats discussed earlier in this section. The MAC was designed with this in mind, rather than an adaptation driven by reduced absorptive capacity.

6.8 Conclusions

The aim of this chapter was to illustrate, contrast, and evaluate economic resilience and vulnerability factors influencing social resilience in the case study communities (for economic factors not directly associated with fishing activities). This section will summarise key findings of how this chapter has discussed the question of status based resilience analysis, capital utility and implications of a ‘hybrid’ longitudinal-status based approach involving slow-onset resilience and vulnerability change. The key findings of this chapter are outlined below. They are further addressed in the context of the research strands outlined in Table 2-1.

6.8.1 Key findings

- a) Seasonality continues to play a major role in the economic resilience of the case study communities.

- b) The move from primary and secondary services to a more dominant tertiary tourist-orientated service landscape has introduced new issues of power configurations and increasing exogenous control of property and business.
- c) Second and holiday homes are a major influence in the escalation of property prices while providing mixed benefits to the local economy.
- d) Poverty continues to be an issue in the case study communities and the Cornish region linked to free market influences. Poverty is 'pocketed' in these coastal communities, challenging traditional views of poverty concentration in inland Cornwall.

6.8.2 Economic resilience threads

1) Is the typological approach and evolution a good means of unpacking and giving substance to resilience as a concept ?

This chapter has adopted a vulnerability status based view of community economic factors through a typological view of a) business services, b) housing, c) poverty and d) multifunctionality. This approach was designed to specifically reflect economic issues in the case study communities by 'driving out' these salient issues as grounded emergent data based on a status view supported by more longitudinal views.

This approach allows the unpacking of these issues to inform their impact and (in some cases), their evolution in socio-economic terms. Hence, this does give substance to some elements of resilience (e.g. poverty) when viewed through an economic lens. The typology allows this unpacking of resilience themes by observing the emergent resilience factors e.g. power configurations within Polperro parking services framed in an economic capital (or domain).

The typology also allows a degree of cross-scale factor analysis such as the local car park in Polperro and other scales such as the remote ownership of the car park (which in itself can be viewed as resilient in an economic context but not resilient in the community economy context). Thus, the typology does ‘talk’ to resilience factors.

A weakness of this typology is that it does not have a specific or general focus on resilience, especially in the context of social resilience e.g. social learning. This is addressed in due course, building towards the adoption of the CRVI detailed in Chapter 8.

2) Do the capitals work as a means of exploring resilience (in relation to understanding status, process and transformation ? What are their strengths and weaknesses in these regards ?

As discussed, the conceptualization of resilience as a process goes beyond the notion of buffering against shocks and ultimately endeavours to improve material wellbeing conditions, this necessitates the recognition of power and agency relationships that reproduce inequalities and contribute to vulnerability ([Pelling, 2011](#)). The building, maintenance and reinforcement of persistence, adaptation and transformative capacity of communities are critical and it can be argued that resilience is predicated on the balance of these three elements in process terms ([Béné et al., 2012](#)). This is a framework for a resilience orientated alternative to the adoption of the three capitals discussed in the previous section. This domain issue, and the benefits and deficits of moving away from it, and especially assessing social resilience through a community lens, is built upon through the design and adoption of the CRVI typology in Chapter 8.

One weakness of the capitals is that it focusses perspectives in a capital (or domain) centric way. Resilience can be observed through many lenses, for example,

panarchy and other system based views based on various levels of granularity which allows a better view of processes and contributing events or factors. Panarchy and other system resilience views of community do not necessarily benefit from a 'monolithic' capital constraint i.e. individual systems or panarchies can be other than in the economic or social domains e.g. a social network lens. Indeed, social capital and economic capital have very different measurement perspectives, the former usually focussed on community, or micro-level qualitative perspectives (e.g. social networks) and the latter lending itself to more quantitative macro level views e.g. financial models as discussed in Chapters 2 and 3.

Another weakness is that capital assessment is a common 'language' in many academic disciplines and does not necessarily lend itself to resilience views. The approach adopted in this research is to utilise an initial capital view within this chapter and Chapter 7 and then move towards a specific community resilience, status and process-orientated typological analysis in Chapters 8 and 9 through the CRVI.

This chapter has been useful as a step towards understanding the emergent issues and processes of resilience in the communities. This builds an analytical stance to understand some of the multi-scalar and multifactorial economic resilience processes at work. Examples of this are the identification of resilient and vulnerability processes behind slow and fast-onset growth of tourism in these communities e.g. Polperro and Mousehole respectively. Capitals are not inherently theoretical understandings that focus on social resilience. Resilience conceptualisations such as social learning may yield more fruitful perspectives.

3) Is resilience a useful concept for examining the under-investigated phenomenon of slow-onset forces ? What are the strengths and weaknesses ?

Slow-onset change is a challenging issue in the field of resilience and vulnerability studies as discussed in Chapters 1 and 2 and indeed, throughout this thesis ([Miller et al., 2010](#); [Pelling, 2011](#); [Pelling & Manuel-Navarrete, 2011](#)). This study has adopted a community actor-orientated view towards resilience, and in the scope of this thesis, vulnerability is its counterpart in terms of community wellbeing .

The use of a hybrid status-based approach is adopted in this chapter to provide a means of building and improving on a 'snapshot' based perspective of resilience. This hybrid view is used as a vehicle to unpack resilience issues giving substance to resilience as a concept. This view is termed in this research as the utilisation of 'dynamic indicators' ([Miller et al., 2010](#)). These indicators capture the functional influential processes (rather than a detailed breakdown of processes), and the interrelationships between them, to identify changes in vulnerability and resilience over time. This also encompasses some of the dynamic system based views of a panarchy.

The use of 'dynamic indicator' type status changes over time view informs important aspects of longitudinal change such as the early adoption and slow creep of tourism in Mousehole through secondary and proxy data (also see Chapter 5). This chapter has assessed some aspects of resilience as single status snapshots e.g. housing stocks and further providing a hybrid view of resilience (integrating some aspects of process). Thus, three different techniques (there are likely more) can be envisioned for the analysis of slow-onset change. Firstly a 'status' or 'snapshot' based view ([Cosco et al., 2016](#)). Secondly is that of a hybrid or 'dynamic indicator' approach ([Miller et al., 2010](#)) where primary, as well as proxy and

secondary historical data, functional processes (where possible) and linkages are used to identify, build and support status views ([Miller et al., 2010](#)). Thirdly, is a more traditional approach to longitudinal analysis wherein multiple and iterative analysis is undertaken using similar (or identical) sets of assessment criteria ([Cosco et al. ibid](#)). In this research, the first two of these approaches are adopted. The benefits of this approach are that they can help (at least partially) to shape a flexible resilience trajectory view in terms of the three aforementioned resilience components, absorption, adaptation and transformation moving from the descriptive to the analytical.

An example of this is the story of fishing and tourism in Mousehole where the community was adaptively 'forced' into tourism as fast-onset event by the loss of fishing to neighbouring Newlyn. However, it built resilience through its early entry into tourism by adaptation in the 1960s. This makes it likely that it is now more able to deal with changes by absorption in resilience terms thus avoiding the shift (as a snapshot status) to a transformative phase in the three-component process. This informs views of economic resilience component 'balance' both within Mousehole and comparatively to other 'systems' such as Polperro and Mevagissey.

- a) Seasonality continues to play a major role in the economic resilience of the case study communities.

Environmental processes such as weather are closely interwoven with tourism and economic behaviours at the community level and have contributed towards the evolution of the tourism seasonal cycle in varying degrees in the case communities. The vulnerabilities that have evolved through seasonality and weather in traditional fishing communities, have been inherited and passed to the 'new world' of tourism as

a recurring annual process. However, weather driven aspects of seasonality has traditionally driven adaptive behaviour towards pluriactive activities, a resilient trait. This is a significant issue in Polperro, less so in Mousehole due to its extended tourist season, and less so again in Mevagissey with its modern year round fleet balancing a 'seasonal cycle' shift to adaptation, especially in the winter months. Seasonality can be described as a panarchy in these communities with a slow winter phase where adaptive strategies may (or may not) be in place and a fast and hectic summer phase with a major emphasis on livelihoods generated by tourism and where income is generated. In Mousehole, the longer tourist season allows a more consistent income stream over winter. In Mevagissey, the strength of fishing underpins the community economy over winter. In Polperro, a shorter tourist season driven by a high degree of dependence on tourism makes Polperro vulnerable in economic terms with few signs of adaptation. Thus, Polperro may be 'slipping' towards a tipping point towards some form of economic transformation.

Seasonality is the most influential economic force in the case communities and requires a resilience-focussed analytical approach again better served through resilience understandings such as social learning.

- b) The move from primary and secondary services to a more dominant tertiary tourist-orientated service landscape has introduced new issues of power configurations and increasing exogenous control of property and business.

Polperro has a particular problem with a single, fast-onset, remotely owned power configuration dominating the parking services causing business issues, problems with tourist retention, and expensive short term local community parking leading to community tensions. Mousehole parking is more community orientated and managed by local interests, while in Mevagissey competition between private

companies and the Unified County Council has produced affordable and varied parking options. This has driven the absorptive capacity of Polperro in economic terms to an adaptive position, and, with little apparent adaptive capacity available, threatens a move to transformation in Polperro with no promise of community benefit in the context of an increase in second and holiday homes (discussed further in the next section).

Tourism governance also exists at many scales extending to EU funding and the Unified Cornwall County Council and multiple regional and local initiatives to drive tourism in Cornwall. Coastal communities in Cornwall depend on differential levels of tourism, and there is a need to attract visitors through these many marketing agents to influence wider scales such as national and international scales in a panarchy view. Thus, wider system scales can influence people at several scales simultaneously in attracting visitors to the case communities. It can be inferred that the 'wicked problem' discussed in Chapter 2⁵⁸ is, in no small part, caused by the advent of tourism itself creating a market for second and holiday homes as they are exposed to the global markets through tourism across wider scales and constraining or promoting influences in panarchy terms.

- c) Second and holiday homes are a major influence in the escalation of property prices while providing mixed benefits to the local economy.

Fishing decline as well as other employment options have threatened adaptive capacity, coupled with exogenous free market control of local 'assets' These processes strongly link to a degradation in community services threatening local agency ([Wilson, 2012a](#)). Locals are becoming less able to afford to buy property in

⁵⁸ Whereby the characteristics that attract people to coastal communities may be the agent that causes their own demise through cultural change as people buy second homes and businesses acquire holiday homes.

their 'home' communities due to buildings becoming second and holiday homes, both purchased and owned from a different scale.

At the same time, poverty has driven vulnerability in Cornwall with the increase in house prices and non-indigenous property ownership. This indicates a lack of benefit for fishing communities who suffer from the negative spiral of increasing house prices and a widening gap of prosperity and gentrification. This emergence of delocalised wealth contrasts strongly with hidden and pocketed poverty in close proximity.

High numbers of second and holiday homes have the most serious socio-economic consequences in Polperro. This is due to the triple blow of predominantly exogenous ownership and 'outsourced' property maintenance in a globalised economy as well as the power issue of the car park and escalating house prices. Spiralling house prices as an economic factor has diminished the absorptive capacity of the community of Polperro and has pushed it to a forced adaptation for residents to move out pathing the way to long-term transformation as the last vestiges of the old 'core' community die out. Remote ownership continues to expand in Polperro as it steers towards a trajectory of being a gated community and 'ghost town' through a slow-onset process.

In Mousehole, holiday home incidences are the lowest across the communities while second home occurrence is the highest. This offers a better opportunity for increased numbers of visiting service and retail consumers to support endogenously owned businesses. In Mevagissey, the lowest incidence of holiday and second homes reflects the engrained working character of the community in its fishing and tourist activities (see Chapter 5).

The issue of second homes is strongly linked to gentrification and this is reinforced by theories of the severing of 'dwellings' from communities through second homes and the creation of 'fractured' communities. Wealth and housing affordability is 'sucked out' of the coastal communities in this research by the advent of second homes. From a panarchy perspective, it can be envisaged that the community scale is ceding its wealth and property to a different panarchy of remote owners on a regional or national basis who 'live' and 'exist' elsewhere for most of the year. Thus, a former 'community asset' may only physically exist in a community such as in e.g. Mousehole. Impact to locals is profound in terms of its escalating affordability to locals and the creation of dead social spaces that may dominate whole streets.

- d) Poverty continues to be an issue in the case study communities and the Cornish region linked to free market influences. Poverty is pocketed in these coastal communities, challenging traditional views of poverty concentration in inland Cornwall.

Poverty in all the case communities is entrenched and hidden. Mousehole suffers least from poverty followed by Mevagissey, then Polperro, but all of these communities are within the most vulnerable third within the UK deprivations indices and have significant poverty relative to the UK. What is apparent in this research is that poverty has been a long-term sustained process for decades in all the case communities. This constitutes a significant vulnerability to these communities. Community wellbeing is vulnerable through this status or 'lock-in' of poverty.

6.8.3 Panarchy

Panarchy has been used primarily as a descriptive device in this chapter to illustrate the existence of different systems that may interact with each other at different or the same scales. Examples of this were the remotely owned Polperro car park and the fishing transition to the Newlyn 'fishing panarchy' diminishing the full seasonal panarchy of fishing in Mousehole to the summer months. Also, from a panarchy perspective (see Section 2.2), Mousehole underwent a transition in the 1960s after its established institutional fishing period moved to Newlyn and its early adoption of tourism. Having undertaken this adaptive phase early (and exposed to a panarchy based in Newlyn), it is now arguably in another institutionalised phase with little adaption obvious but maintaining its business independence at the local business scale. Hence, cross-scale business interaction is largely confined to the supply chain into and within the Mousehole community, which retains its own agency. However, this is subject to global influences through tourism competition at Cornish and global scales.

As a descriptive vehicle, panarchy is useful in this research. However, the operationalisation or active use of panarchy is problematic in its application in the analysis of social systems as alluded to in Chapter 2. Panarchy is useful in the observations of multi-level systems and nested relationships. However, in the case of social 'thresholds' such as power configurations, agency and the adoption and influence of historical and cultural context where social relationships are negotiated, this adds uncertainty and complexity that is problematic to operationalise using panarchy views ([Berkes & Ross, 2013](#); [Berkes & Ross, 2016](#); [Pelling & Manuel-Navarrete, 2011](#)). Implications on the use of 'dynamic indicators' is built upon in Chapter 8 moving towards a more detailed view of resilience drivers and community

trajectories. Using this rationale, the adoption of these 'dynamic indicators' as a core analytical tool is supported by the descriptive use of panarchy in this research rather than panarchy as a core analytical method.

6.8.4 Multifunctionality and pluriactivity

Pluriactive options for fishing communities vary between the case communities. Historically, pluriactivity has been a norm through which communities can improve their 'lot' by engaging in multiple and seasonally based employments envisaged as an adaptive strategy and a resilience building activity. This adaptive strategy might also be interpreted as a vulnerability as the community members were 'forced' into pluriactivity. However, the reduction on pluriactive options through loss of mining, quarrying and (some) fishing has been replaced with, essentially, a tourism based economy which is highly seasonal and which, in itself can be viewed as a vulnerability as pluriactive options decline for community residents. Conversely, employment options have also grown with the advent of personal and public transport that has widened the scope of livelihoods to different scales and cycles of employment and closer links to the global economy.

The assessment of resilience through pluriactivity is thus problematic. However, it is probable, overall, that the case communities have suffered in community terms through a loss of pluriactive options. Thus, pluriactivity, in general, is viewed here as a resilient trait and a community is probably less vulnerable through the loss of one type of livelihood from many livelihoods than a loss of one from few options. This is particularly true in communities with few livelihood options when exogenous actors (or local power configurations) may control some or all of these (few) options.

The benefits or resilience building economic attributes of multifunctional adaptation are more clear-cut than notions of pluriactivity in the case communities. This is demonstrated through the dual purposing (or repurposing) of fishing boats in Polperro and Mevagissey. Importantly, notions of multifunctional and pluriactivity activity reflect the multi-faceted perspective of livelihood assessment illustrated in this sub-section.

This chapter has explored resilience through an economic lens, a social lens is now adopted in Chapter 7 moving further towards resilience analysis.

7 Social issues and resilience in the case study communities

7.1 Introduction

The aim of this chapter is to analyse and evaluate how social issues through e.g. social learning and social networks can influence social resilience and vulnerability within the three Cornish case study communities. This chapter structures and frames social resilience factors within notions of socially connected communities (Section 7.2), event memory (Section 7.3) and the critical aspect of agency and power (Section 7.4), both across and within the three case study communities. Section 7.5 marks the conclusion to this chapter.

As considered in the context of Chapter 6, notions of a) typological resilience analysis using concepts of status, process and transformation, b) the utility of social capital and c) the validity of resilience for absorption, adaptation, and transformation linked to slow-onset resilience (vis-à-vis slow and fast-onset change) are discussed. Resilience is further linked to social policy in Section 7.4.5. Linked to Chapters 2 and 6, the use of panarchy, as an overarching resilience analysis technique, is further challenged in favour of a simpler strategy using some of the notions of nested adaptive systems adopted in panarchy theory (also see Section 7.5.3).

Social memory, to recap from Chapter 2, is the notion that human experience is infused with memories of events, along with lessons and emotions of the past, that contribute to the evolutionary development of communities through social change and adaptive capabilities ([Adger, 2000](#); [Masten, 2001](#); [Masten & Obradovic, 2008](#); [Wilson, 2012a](#)). These memories form an important factor in the shaping of the 'social fabric' of communities enmeshing the myriad complexity of human

relationships ([Hall-Arber, 2003](#)) within communities ([Huijbens, 2012](#); [Wilson, 2012a](#)). Social memories are 'social products' reinforced by interaction within social groups ([Cubitt, 2007](#); [Wheeler, 2014](#)). The 'proximity principle' ([Ebbesen, Kjos & Konečni, 1976](#)) discussed in Chapter 6, expresses the proclivity for humans to develop relationships with those around them and to form groups of mutual interest and support. This is important in building resilience through social networks and the development of 'social cohesion' ([Uzzell, Pol & Badenas, 2002](#)).

As Chapter 2 highlighted, communities can develop resilience as a response to crisis as a community, and through individual agency ([Magis, 2010](#)). This is manifested as a process and may develop resilience (or vulnerability) characteristics over varying timescales. Resilient communities can assert influence on change and uncertainty through their agency ([Berkes & Seixas, 2005](#); [Magis, 2010](#)). Communities may enhance personal and collective ability in response to, and to influence change stemming from external 'controlling/controlled' systems ([Colussi, 1999](#); [Hopkins, 2008](#); [Wilson, 2012a](#)). Magis (*ibid.*) also postulates that resilience can be both planned and pro-active, or unplanned and reactive by developing resilience in times of crisis strengthening community bonds and developing 'community capital'.

This is important because social resilience (and vulnerability), is expressed through many resilience factors at the community level observable through a snapshot (status) view and as processes. For example, some of these factors are collectively called social cohesion composed of elements of collaboration and reciprocity in sharing resources and ideas adaptively ([Johnson, 1986](#)). These factors (e.g. collaboration) may be observed through status, or linked to status longitudinally ([Wermer, 2005](#)). Also important is the slow-onset impact of incomers and their

influence on social networks and hubs, influencing loose and tight social connections across networks and through cross-scalar effects.

Research suggests that people-place connections are a core factor in social resilience and not isolated to the geographical community ([Amundsen, 2012](#); [Ross, 2010](#)), but also from the social 'niches' in communities, such as post-offices and community centres. These are described here as social hubs of physical or social memory through 'communities of the mind' ([Ross, 2015](#)). These 'places', or 'niches' are resilience factors. Brown ([2016, p.79](#)) portrays social resilience as firmly embedded in human development and well-being ([Masten, 2001](#); [Masten et al., 2009](#); [Masten & Obradovic, 2008](#); [Masten, Powell & Luthar, 2003](#)). This community 'social fabric' is important in well-being ([Huijbens, 2012](#)).

The typological approach in this chapter (see Table 7-1), building on Chapter 6, is composed of an overarching social capital lens supporting three resilience topics a) socially connected communities b) event memory and c) agency and power. These resilience topics further frame resilience and vulnerability themes and factors. These resilience topics are analysed in resilience terms through status-based assessments supported by a proxy longitudinal process narrative. A brief synopsis follows the thematic table (Table 7.1) to clarify the themes within these sections. A key thread in this research is an underlying narrative of how resilience (or vulnerability) factors may be specific to some groups and individuals and not others ([Brown, 2014](#)).

Section Topic	Themes, Resiliences and Vulnerabilities
Section 7.2 : Socially connected communities	Themes : social hubs, social groups, collaborative working, self-sufficiency and identity, incomers, festivals
	Resiliencies and Vulnerabilities : bonding, bridging, reciprocity, trust, efficacy, information, social opportunities, people-place connections, identity, intergenerational learning
Section 7.3 : Event memory	Themes : Disaster and mourning, traditional crafts, iconography
	Resiliencies and Vulnerabilities : shared grief, community cohesion, social networks as agencies of support, tradition, expression of heritage
Section 7.4 : Agency and power	Themes : power, agency, super-attenders, active agents leadership, governance,
	Resiliencies and Vulnerabilities : power imbalances and inequalities, collaboration, pathways, lock-in, power configurations, agents of stasis and change, globalisation

Table 7-1 : Chapter 7, sections, themes and resilience factors - Source : ([Author](#))

The ‘socially connected communities’ section (Section 7.2) is composed of topics framing social networks, social hubs, social groups, collaborative working, self-sufficiency, the integration of incomers and community events. Festivals provide insight into identity and intergenerational learning and opportunities for the community to celebrate. Research suggests that community identity is strongly manifested through the celebration of festivals and further builds on the cohesive ‘glue’ described earlier as part of ‘social fabric’ ([Narayan-Parker, 1999](#); [Rao, 2001](#); [Woolcock & Narayan, 2000](#)).

The event memory section (Section 7.3) frames community disaster and mourning, along with resilience consequences for community members. Event memory is influenced by the sharing and marking of these events forming social memory embedded in communities ([Wilson, 2015a](#)). The lived memory of these events through the marking of anniversaries is augmented with active views of heritage traditions such as boatbuilding ([Acott, 2011](#); [Urquhart & Acott, 2014](#)). A visual method analysis depicting how community fishing heritage is depicted through

postcards is undertaken, as is the use of menus and signage in a semiotic sense ([Markwick, 2001](#)). Social memory is also marked through births, funerals and weddings, with these social rituals being a key 'actor' in the 'glue' and constituent in to how individuals invest in social groups, creating 'group loyalty' ([Van Vugt & Hart, 2004](#)).

The agency and power section (Section 7.4) encompasses the themes of power configurations, specific agency, and leadership and governance. This addresses, for example, the specific resiliences and vulnerabilities of retention and distribution of power along with the association of power with agents of change, self-interest and altruistically contrasting aspects of communities ([Palmer, 1991](#); [Palmer, 1993](#)). Globalisation is also assessed at the community scale to observe aspects of self-determination and localism ([Hopkins, 2008](#); [Mol, 2002](#); [Wilson, 2012b](#)). Social policy is discussed in the context of social resilience at the community level with specific regard to exogenous panarchies, influence and control.

7.2 Socially connected communities

At the core of this section is the notion of human relationships and social networks framed in social learning ([Sander, 2003](#)) (see Table 7-1). Research suggests that it is informal, rather than formal institutions, that constitute the best environment for social learning being strongly influenced by social networks ([Van Assche et al., 2013](#)) and it is these social networks that are a core focus of this section and their importance in notions of 'social capital'. Importantly, the concept of social networks in this research is also focussed on the relationships between people on scales within and outside the case communities who are likely to know others

personally and socially through these networks. This physicality of connection is in distinct contrast to ‘virtual’ social networks e.g. Twitter™ and Facebook™. Wellman ([1996](#)) states the importance of how social networks are framed :

“A network can be anything we want it to be. It depends on how we define it. When we change the definition, the conclusions change too.”

([Wellman, 1996, p.6](#)).

Traditionally, fishing communities were predominantly comprised of residents embedded in fishing and other primary sector or supporting livelihoods. These livelihoods were (and are) linked to the infrastructure of the harbour areas and housing architecture reflecting the practical resources needed to support these livelihoods. These communities were limited in their exposure to other scales through transport and geographical constraints (except for fishing networks), evolving over a multi-generational and slow-onset timescale. Fishing and fish processing operations discussed in Chapter 5 had historically strong linkages strongly embedded in ‘close’ and ‘bonded’ communities ([Dwyer, Just & Minnegal, 2003](#); [Minnegal, 2003](#)) and their intrinsic families and culture ([Berkes, 1985](#); [Symes, 2009a](#); [Urquhart & Acott, 2014](#)).

Life was hard and mutual dependency on fellow residents was vital. People worked, celebrated, grieved and worshipped together living in close proximity and poverty ([Macpherson, 2010](#)). The transition to modern work-life demarcations ([Marshall & Marshall, 2007](#)) and imposed urban views from this social environment is anachronous ([Woods, 2006](#)) to established social networks and a threat to inferred resilience traits within these ‘traditional’ networks. This may also be a consequence

of governance and its imposition on a community capacity for self-organisation and social autonomy ([Adger et al., 2005](#)). This is discussed in more detail in Chapters 7 and 8. Changes in community composition may 'steer' communities on a transitional trajectory process divergent from traditional homogeneous social networks towards heterogeneity ([Cattell, 2001](#)). This process may then 'cycle back' (in adaptive cycle terms) to a 'new' homogenous community through gentrification and other slow-onset longitudinal socio-economic processes. This can be illustrated using social, economic, environmental, cultural and political capitals. However, as argued in Section 6, the use of capitals constrains notions of process and interdisciplinarity through capital 'languages' and concepts embedded in disciplines. However, this cycle (and others) engages with notions of systems and panarchy where exogenous systems such as exogenous wealthy buyers, can determine the trajectory of a local system, perhaps eventually imposing itself totally and pushing aside old notions of a traditional system, often leaving a virtual heritage 'of the mind' as its legacy.

This Mevagissey second home owner (and resident) comments on the move towards a heterogeneous 'mix' in the community :

"The 'mix' is created by people such as us having second homes in Mevagissey and others who settle in the community from elsewhere. However, at the present time, the feeling of identity and community within the indigenous population is still very strong, to the extent that it combats any outside influence that may be unwelcome. In my time, there has been a definite watering down of the indigenous population of Mevagissey but evidence of further erosion does not seem to be there."

Retired Mevagissey resident and second home owner ([MRQ-7492](#))

This incomer is also a second home owner recognising the importance of the identity of 'indigenous' community members and notions of 'equilibrium' in the

numbers of the 'indigenous' population. The quote hints at a building of resilience to 'unwelcome outsiders'. This observation may indicate a slowing down of population flux, which raising a question of the longitudinal meaning of 'indigenous' in a fishing community ([Nuttall et al., 2005](#)). This can have ramifications in observing place attachment and 'self' and 'given' normative community identities ([McLean, 2006](#); [Minnegal, 2003](#)).

Social memory of the maritime and fishing past is the bedrock of heritage in Cornish fishing communities, and businesses utilise this character to draw tourists ([Willett, 2009](#)). This attraction takes place through heritage, persistence and retention of culture linked to slow-onset change and older value systems of a less complex and tolerant nature. This Mousehole shop owner casts her view as to why and how businesses are able to attract custom through a proxy of a bygone age :

"History and heritage attracts people through the architecture of fishing and the values of past times. It feels like stepping back in time with feelings of comfort and toleration."

Mousehole shop owner ([MBQ-002](#))

In fishing villages today, social memory of fishing is, arguably, now a relic or artefact of that period of history ([Brookfield, 2005](#)). By inference, social learning associated with those memories, may capture, or 'warehouse' these memories into 'romantic' commodified heritage as museums and tourism heritage artefacts as well as active expressions of contemporary fishing ([Kennedy & Kingcome, 1998](#); [Kennedy, 2013](#)). This Mevagissey resident conveys a sense of the 'emotional markers' of heritage and how a community 'plays' to this notion of its heritage :

“Heritage culture is pervasive in day to day life, obviously the fishing heritage is important in providing eternal and emotional markers, this is a sense of romanticism already held by tourists. Mevagissey does play to this ‘ideal’ although it doesn’t have to make a conscious effort, though I’d say the village architecture is more romantic than the fishermen themselves.”

Mevagissey resident ([MRQ-7418](#))

The real lives in the lived memory of fishing is now a vulnerable narrative in an aging generation in many fishing communities which have undergone various levels of transition to a tourism culture ([Adger, 1999a](#); [Berkas & Jolly, 2002](#); [Olick & Robbins, 1998](#); [Tallentire, 2001](#)). This research takes place at an important historical juncture where fishing and heritage both meet and diverge in the dynamics of change in fishing communities ([Béné et al., 2016](#)). Fishing communities may want to reassert their fishing heritage and distinctiveness in the face of threats to their cultural identities ([Van Ginkel, 2009](#)) and this is done in many ways (e.g. festivals, see Section 7.2.6). The fast pace of much of modern life sits in contrast to the slow-onset perception of change and imagery of fishing community life.

Age demographics in the case communities are important. Fig. 7-1 depicts the age distribution in the case study fishing communities (which are remarkably similar) and the much lower general age trend for Cornwall. The case study communities have a significant number of two age groups, those of (55-59) and (60-64) relative to Cornwall. There is also a low representation in the case communities of 15-35 year olds relative to Cornwall. This is important as these age groups represent the start of many people’s working lives and the end of their working lives. A possible inference of these data is that there are fewer families with children in the case study communities and a higher representation of people nearing retirement age. This would suggest outmigration of youngsters and in-migration of people approaching, or

at, retirement age. This disproportionality is driven by in and out-migration to the case study communities rather than from a retained aging population.

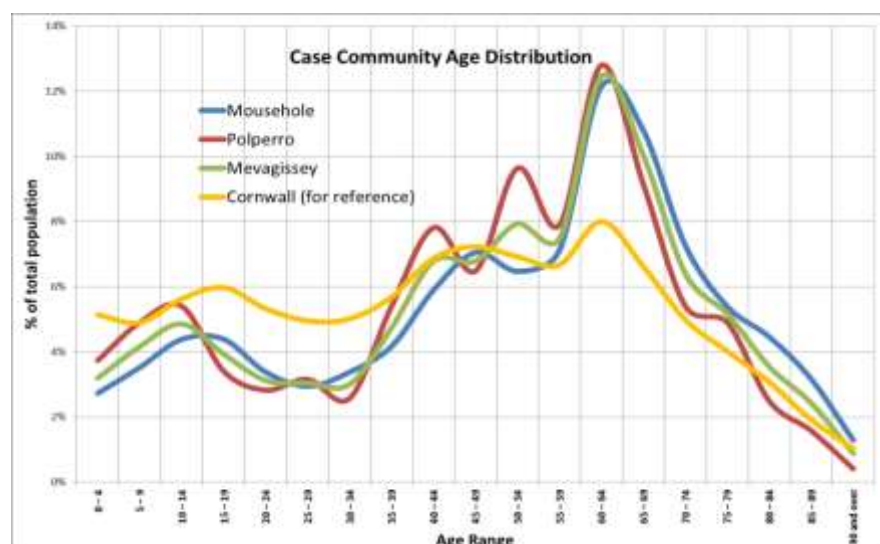


Figure 7-1 : Community age distribution - Data Source : ([ONS, 2011a](#))

These case communities are now assessed in resilience terms through their local scale social networks, groups and hubs, as depicted in Fig. 7-2 showing their relative numbers and composition. These data were collected by observation of parish magazines, notice boards and day-to-day conversations with community members as well as the more formal interviewing, questionnaires and visual methods adopted.

Fig. 7-2 illustrates community scale enterprises (such as a new Mousehole village hall), clubs and societies, and the physical ‘hubs’ that the community has adopted in its social life within each of the three case study communities.

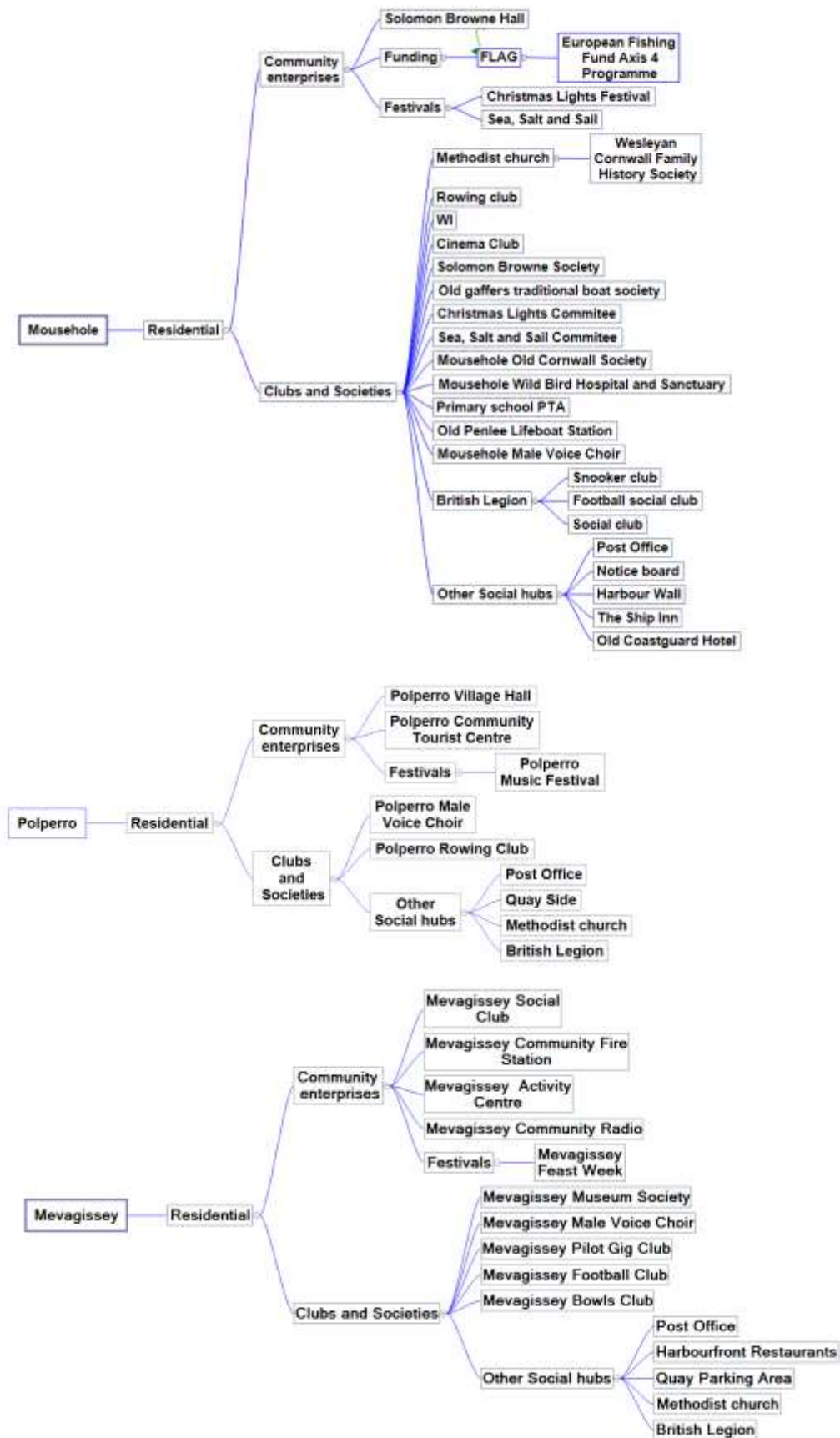


Figure 7-2 : Case study community social networks - Source : (Author)

This diagram (Fig. 7-2) is primarily a status-based view, but with 'back stories' of social network processes and transformations discussed in more detail in Sections 7.2.1 and 7.2.2. Examples of hubs include the British Legion in Mousehole. This is a physical hub hosting many informal (e.g. meeting friends and informal socialising) and more formal events such as weddings, funerals and clubs. These groups and hubs provide social options for residents and opportunities for newcomers to integrate in the community building reciprocity, companionship, trust, collaboration, intergenerational fluxes and information sharing. These are important aspects of social resilience through the building of absorptive and adaptive capacities over long timescales building shared values and mutual information as highlighted in previous chapters.

Fig. 7-2 also illustrates the community groups in the three case communities, observed from parish magazines, notice boards, websites, and shop windows. It is the dynamics of these groups and their connections with heritage, as well as the participatory linkages that assist adaptive capacity building ([Bernier & Meinzen-Dick, 2014, p.36](#)). Fig. 7-2 does not cover all aspects of case community networks.

It can also be seen in Fig. 7-2 that Mousehole has significantly more (visible) social clubs than the other two communities at 16 compared to four and two for Mevagissey and Polperro respectively. In Mousehole, this high density is especially significant with its relatively small population relative to the other case communities (see also Section 3.3.3). This provides strong bonding opportunities and a high network density and can also further facilitate bridging connections to exogenous networks or systems of interest e.g. funding organisations, historical societies, traditional boat organisations and festival organisers. Social capital analysis demands a deep ethnographic community engagement with social life rather than

general notions of community mobilisation to bring about material benefits ([Pelling & High, 2005](#)). Social capital has weaknesses in its use as a vehicle to assess resilience further discussed in this chapter's conclusions (see Section 7.5).

The number of social hubs present is broadly similar across the communities as are festivals and community enterprises. Mevagissey has a large community centre⁵⁹ that is a significant investment in its social capital, funded mainly through UK Lottery Fund and the EU. This is a major (and modern) social venue compared to others across the case communities.

Community	Social Clubs	Physical Social Hubs	Festivals	Community Enterprises
Mousehole	16	10	2	1
Mevagissey	5	9	1	2
Polperro	2	9	1	1

Table 7-2 : Community social landscape - Source : ([Author](#))

The roles that these hubs play in community life are varied and important in the case study communities as catalysts or 'venues' for social network processes and diversity building in residential groups at the local scale, and beyond.

7.2.1 Social networks : hubs

Whilst groups and individuals are primary considerations in social networks, places, or hubs are essential to congregate and meet to form place-based community narratives and places of meetings and encounters, for example libraries ([Ragnar, 2005](#)). These constitute important foci of social communication serving to

⁵⁹ MAC – Mevagissey Activity Centre.

strengthen many aspects of social resilience as a form of 'social infrastructure' ([Mowbray & Bryson, 1981](#)). This encourages the formation and evolution of social networks, and potentially increases the adaptive capacity of a community. This demands a deeper, place-based, understanding of cultural trust and reciprocity discussed earlier in this chapter ([Pelling & High, 2005](#)). The provision of a place for people with mutual interests to meet, or perhaps a place to resolve community conflict and alleviate social tension are important factors for communities to gain awareness of social issues and threats and opportunities for the community. Community 'hubs' have also been described as 'resilience-generating institutions' shaped by the social and economic drivers and systems of distribution including the policies that support them ([Bottrell, 2013](#); [Fine et al., 2010](#)). Community hubs speak directly to notions of social resilience.

Social groups and individuals utilise these hubs forming evolving community 'fabric' ([Huijbens, 2012](#)). Hubs have been utilised, sometimes over centuries, as a product and evolution of socio-economic and livelihood change within communities e.g. harbours walls, pubs and chapels, some fixed and some transient. Thus hubs are linked to the slow-onset evolution of social change. Their removal or 'repurposing' may have far more impact socially than just visible changes in physical usage e.g. the 'repurposing' or transformation of Methodist Chapels to residences.

Hubs may also be of contemporary origin, such as the MAC leisure centre in Mevagissey, differentially utilised through social group fluxes and changing community compositions through the continuing processes of absorption, adaptation and community transformation ([Helies, 2010](#)).

A sustained stimuli of residential social communication encourages social participation and, in some cases affirmative action, helping to create and support

social networks, a process that may take place on generational time-scales ([Bodin & Crona, 2009](#); [Doreian & Stokman, 1997](#)). This is nothing new and is the 'ordinary magic' of communities ([Masten, 2001](#)) but is, nonetheless, still vital and notably deficient in policy formation and application (see Section 7.4.5) with little apparent value placed on its importance in social resilience. Hubs in this research are defined as physical entities covering a wide range from church halls to harbour walls. It is important to highlight that physical hubs may undergo adaptation in how they are utilised, by what groups, and for what purpose, and through what processes. A hub may also influence the groups who use the resource such as church groups using a chapel or scout or guide groups. Thus, community hubs are place-based and contextually embedded in community culture. Social hubs may be architecturally imposing e.g. a cathedral. It is what happens within, and around social hubs, that is key in resilience terms.

It is important not to underplay the social importance of a simple notice board or community posters stapled to a lamppost (see Fig. 7-3). These are visible elements of community life.

These noticeboards are community message fora and part of an intrinsic social communication network. Fig. 7-3 also shows that the festival committee has actively encouraged the participation of members of the community for the famous Mousehole Lights Festival, active since 1952 (yellow box in Fig. 7-3) ([Buttery, 2012](#)).



Figure 7-3 : Mousehole lights poster- Source : ([Author](#))

This festival is organised by volunteers retaining a cultural legacy as well as providing valuable footfall for businesses, and extending the business season into the winter ([MBI-001](#)). This extended season in Mousehole is a unique adaptation among the case communities and has evolved longitudinally over 80 years in the historical temporal 'space' between the loss of fishing to Newlyn and the early onset of tourism. This example can be both an example of intra-community informational 'bonding' and a 'reaching out' to new residents, 'second homers' and visitors creating opportunities to build resilience through social bonding by joining in with community activities ([Putnam, 2000](#)).

Whilst there is a wealth of research on the use of digital technologies for 'virtual community' noticeboards ([Alt et al., 2011](#)), there is little on rural village notice boards. It is the physicality, visibility, common access, simplicity and personal nature of a traditional physical noticeboard that infers a greater permanence and substance to rural communities.

In Mousehole, fishers have traditionally gathered on the harbour walls to converse on fishing and worldly matters. This still happens with the few remnant fishers and other community members. Participant observation also revealed other social hubs including the Post Office where people stopped and talked frequently around the close-by village notice board, it was a conspicuous social hub. This noticeboard reflects some of the diverse and personal aspects of the village. Postings included a Solomon Browne Memorial Hall fund raising quiz, film nights in a local hotel, an advert for local fish supplies through Mousehole Fish, local services, a birthday celebration, Methodist Church services, charity garden openings, and, finally, an advert for coastal cruises on a fishing boat from neighbouring Newlyn. In Fig. 7-4 the yellow boxes highlight this researchers request for people to become involved in this research project, research updates, and a bag containing contact cards explaining the research and contact details for the author. It is of note that the community notice board has public access for postings. There is no separate parish notice board and all community notices are found here, in the Post Office window, or stapled to lamp posts.



Figure 7-4 : Mousehole Community Notice Board - Source : [\(Author\)](#)

Mousehole obtained permission to build a village hall facility within an existing storage building, as a multi-purpose heritage centre and festival storage. An external professional fundraiser was hired by the Solomon Browne Committee demonstrating business acumen in raising the £350,000 to convert the Cornwall County Council owned building. Eventually Mousehole raised £500,000 for the hall through the National Lottery Fund as a heritage initiative, justifying the employment of the professional fund raiser and the centre was due to open in August 2016 ([Cornishman, 2016](#)). This multifunctional hall adaptation was designed to address vulnerability issues such as rural isolation, loneliness, employability, independence and wellbeing in old age building resilience in the community. It will also include space for Mousehole's Harbour Lights and a heritage centre providing a valuable and sustainable community owned resource.

Other social hubs in Mousehole include the Royal British Legion Club hall, which provided the only “real communal space in Mousehole” ([MRI-006](#)) apart from the (one remaining) Methodist Church. The Hall is used for weddings, funerals, birthdays, and as a regular social club. Social values are echoed by this resident :

“The social aspects of Mousehole are critical in this community. For example social clubs like the British Legion host all village events, the Ship Inn is a great pub and reflects working lives and heritage and remembers the Solomon Browne tragedy.”

Mousehole business owner/resident ([MBI-001](#))

The other major social hubs are the one remaining Methodist Church (the other one is now a private residence), the busy harbour side Ship Inn which hosts a vast array of photographs and artefacts from the maritime history of Mousehole, and the sophisticated Old Coastguards Hotel at the margin of the harbour. This hotel underwent renovation and adaptation in the 1990s into its current configuration. Prior to this it was an extremely active and vibrant pub with a reputation for ‘wild’ parties ([MRI-001](#)), there is only one pub now in Mousehole. Initiatives to capture the Mousehole fishing history and folklore were undertaken by the Tremough History Department at the University of Exeter as part of the Objective One EU initiative discussed in Chapter 5 ([Morgan, 2008](#)).

The Polperro social hubs include six pubs, a Methodist Church, a British Legion Club, the Post Office and the Village Hall (see Fig. 7-2). The quay area is a traditional meeting area for fishers and locals. The high number of pubs also reflects the ‘dominant’ commercial side of Polperro. One pub/restaurant with on-site B&B and rooms, located close to the car park, was almost exclusively utilised by passing trade and tourists. The few remaining locals, as well as visitors used the other pubs

located in the harbour area. The whole village is geared for seasonal trade and a high throughput of customers and all the pubs remain open throughout the year, with 'skeleton' staff in the winter months. A high summer seasonal throughput was characterised by restaurants and cafes requesting clients to vacate their seats for new customers on finishing their meals, something not observed in the other two communities at any time. The lack of social community groups, discussed earlier, indicates that there may be little supporting social and collaborative infrastructure to build or maintain resilience in times of commercial difficulties, i.e. the generation of vulnerability as discussed earlier. There were four businesses for sale in Polperro at the time of the field research; two of these were physically closed for business. A more recent visit in 2016 to all case communities saw this number increase to six for sale in Polperro (three closed) and none in the other case communities.

The Polperro village hall annex hosted a new visitor centre supported by volunteers providing a rich narrative of community matters in an interview ([MRI-002](#)). The main thrust of the interview was, although there was commitment from volunteers, business-orientated interests dominated the Polperro community agenda subsuming social actors. This notion was further reinforced through observations at a Parish Council Meeting. It was very difficult to secure business interviews in Polperro, likely because the field work took place in the peak business period for the community. However, there did appear to be a reluctance to engage in interviews, despite this seasonal issue.

The primary Polperro community notice board (Fig. 7-5) did not permit public postings. Requests to post items were managed by the Polperro Parish Council.



Figure 7-5 : Polperro Parish Notice Board- Source : ([Author](#))

Using status rather than process-based observations, this notice board contains primarily formal governance notices e.g. Councillor Surgeries, a Polperro festival auction, a management committee notice and a notice from the Citizens Advice Bureau. Two other boards were available for more general notices, one of which the author used to promote this research. One of these boards was empty and the other contained a defunct concert notice from a previous year.

The inference from observing the social hubs of Polperro, was that there seemed little activity, or drive, involving the social aspects of Polperro, with the exception of the British Legion Club, a prime social centre for locals but even this was in a visibly noticeable and reported decline⁶⁰. The British Legion is being ‘starved’ of locals to support it as the community is being consumed by the slow-onset changes driven by second and holiday homes. The British Legion does not reflect adaptive capacity building response e.g. to encourage visitors, second home owners and holiday home tenants to use its facilities. Transformation of the British Legion may ironically lead to its adaptation to a second or holiday home leading to

⁶⁰ From observations and many residential comments passed during engagement.

the loss of an important community institution. This is not a healthy sign for Polperro, British Legion Clubs have always been a central social focus in many fishing communities and its degradation is not a good harbinger for social resilience in Polperro.

Polperro hosts an excellent cultural museum. However, museums, though of great value, can only serve to reinforce the imagery of fishing communities through curation. This community detachment from a lived culture may ease access for business interests into the community, further promoting vulnerabilities from weak social engagement to tradition ([Kennedy & Kingcome, 1998](#)). Social vulnerabilities may increase exposure to the nuances of local power configurations and increasingly, globalisation ([Wilson, 2015a](#)). These social vulnerabilities have implications for resilience in Polperro, suggesting that Polperro may have exceeded its absorptive capacity to retain its social hubs as discussed (and networks see Section 7.2.2). Further, that the community demonstrates little adaptive capacity and has a trajectory leading towards transformation from a long and slow-onset impact process of second and holiday homes and the loss of a core year round community. The form this transformation might take is a matter of conjecture, but increased gentrification and eventual gated communities may be a logical outcome in Polperro as the extant social environment degrades.

Mevagissey has a population 2.3 times greater than that of Mousehole and 1.7 times greater than Polperro (see Section 3.3.3). Mevagissey enjoys three community halls, including a new leisure centre the 'MAC', three churches and a community fire station. 'Meva', in the vernacular, also houses the Mevagissey Social Club (MSC). The MSC was formed as a community co-operative in the 1950s occupying a position close to the harbour area and is a very active social hub, mainly

for fishers and retired locals⁶¹. Several formal and informal research interviews took place in the MSC, one result of which was an insightful overnight fishing trip for the researcher with two inshore fishers (see Chapter 5). Two of the local restaurants, the Wheelhouse and the Harbour Tavern are hubs for two distinct groups of fishers, inshore fishers and deep-sea fishers respectively for each restaurant. This reflects a tribal distinction between inshore and deeper sea fishers, manifesting itself in the separate fisher communities in these two establishments, as has been the case for generations. Fig. 7-6 shows the Mevagissey inner harbour central area.



Figure 7-6 : Mevagissey central inner harbour area - Source : ([Author](#))

Fishers tend to congregate in the area to the left at the top of the ancient steps. Deep-sea fishers socialise in the Harbour Tavern (red box in Fig. 7-6), while inshore fishers congregate in the Wheelhouse (yellow box) but both groups also socialise in the MSC (which is in an alleyway behind the red box). Mevagissey Social Club also kindly offered their upper meeting room for the majority of the interviewing.

⁶¹ From observations.

Tourists are visible on a long bench (black box) mingling with the working fishers. The white box shows a 'drying grid' where working boats are held clear of the harbour floor on a falling tide for work to be undertaken (a tidal gauge is also visible in green box). Critically, Mevagissey is a true working fishing port signified through these activities and reflected to the public by the signage when entering the community. The community does not rely on a contrived or curated fishing heritage, Mevagissey hosts fishing on a day-to-day basis and has adapted to survive and maintain its absorption capacity to change through its ability to act both locally and at other scales e.g. European Funding. However, as mentioned in context in Chapter 2, Brexit may dramatically undermine the resilience of Mevagissey through social policy and loss of EU funding (see also Sections 7.4.5 and Chapter 8). This is an area of potential vulnerability that needs close attention in the process of Brexit and its impact on 'Meva' over the coming few years.

Mevagissey has two locked notice boards, only accessible via the Parish Council and containing official notices e.g. minutes of meetings and major community events. The author was not able to gain access to use the notice boards to publish information pertinent to this research and there were no boards available for community postings. Mevagissey was the only community to decline agreement for a drop box in the Post Office for research questionnaire returns. This prompted a strategy for returns to be made by post where not undertaken on the doorstep.

The Mevagissey community reflects beneficial support through a pro-active Harbour Master and progressive parish council, discussed later in this chapter. The Mevagissey Harbour Office, as an institution (Fig. 7-7), has a close affinity with the Mevagissey Social Club through its commonality of retired and active fishers.



Figure 7-7 : 'Meva' Harbour Office - Source : ([Author](#))

This relationship was identified from interviewing the Harbour Master ([VGI-001](#)), from postings in the Harbour Office notice board boxed in yellow in Fig. 7-7 and fisher interviews (e.g. [VRI-003](#)). The Harbour Master (HM) has been instrumental in wide-based support for fishing in Mevagissey (discussed later in this chapter), specifically within the process of the original creation of the fishing co-operative and its resilience building impact on Mevagissey fishing ([VGI-001](#)). The HM has also reached out to other systems and panarchies such as through the FLAG fund to the EU to secure multi-million pound funding for harbour resources. This further builds resilience through enhancing absorptive capacity for commercial and leisure vessel handling and changes in fishing operations, especially in view of Brexit unknowns. The social context of the harbour-master underpins the seamless nature of traditional notions of business and social life through representing the

interests of the local community whilst simultaneously being a member of the community and performing a key role. This contrasts with the absence of a local social context for businesses operating in different systems such as remote holiday home 'asset' owners. This denotes the depersonalisation of traditional socially involved 'business' by 'faceless' remote business entities operating at different scales of interest, or panarchies and whose owners or shareholders may never even visit the community where their 'investment' resides.

The decoupling of local business and social 'power panarchies' from their integrated local origins has been a slow-onset process in all the case communities. This separation is reflected best in Polperro where business dominates social as a power configuration. In a panarchy context, business is locally weakened and dominant business power now resides in remote panarchies. The configuration of these two 'power panarchies' appears closer to local parity in Mousehole, more exogenously focussed in Mevagissey, and significantly exogenously orientated in Polperro. This also denotes one of many weaknesses in using notions of 'capital' (see Section 7.5.1) and the beneficial use of nested adaptive cycles to describe resilient processes. Social and business 'capitals' have extensive overlaps as well as very different theoretical conceptualisations making linkages very difficult in comparison to nested adaptive utility. Distinctions defined through 'hard' capitals can also mask the positive attributes of social and business interaction at the community level by the exclusive adoption of the economic language of the business world. This underpins concerns about the utility of capitals in resilience thinking as a hindrance to process based resilience assessments.

7.2.2 Social networks : groups and clubs

Research suggests that social ties, from a multi-factorial and multi-layered resilience perspective, may be a community's best resource in maintaining or building adaptive capacity to make changes collectively ([Pelling & High, 2005](#)). While Pelling and High ([ibid.](#)) suggest this in the context of climate change as a global issue, this view has direct pertinence at the community level, as a system, or panarchy. These ties are manifested thorough local system social networks and social groups, and the active presence of these social groups is seen as a resilience attribute, promoting adaptive capacity and the ability to cope with change ([Wilson, 2015a](#)). Place-based social networks connect people, groups of people, and the places where people converse ([Usamah et al., 2014](#)) and are the deeper anthropological aspects of social capital that this research aims to assess but also seeking to interlink to larger 'structural' concerns as highlighted by Pelling and High ([2005](#)). These authors ([ibid.](#)) suggest that relationships and roles overlap significantly in communities defined by formal and informal roles where they come into conflict (e.g. corruption). This again, raises a concern in using capitals in resilience research where social and business domains may be 'seamless' and capital constraints may not provide analytical flexibility (see Section 6.8.2). Pelling and High ([ibid.](#)) suggest that informal networks may dominate over the formal e.g. nepotism and local power configurations and that the formal and the informal may complement each other in other situations. This is important in critiques of panarchy theory that depend on levels or nested systems of fast and slow change. The normal, high complexity, fast and often transient, dynamics of social interactions suggest that panarchy may not be a productive way of describing resilience specifically at the community networks level but useful in the context of relativity and

dependencies to other scales e.g. 'policy panarchies'. The linked notion of nested systems is useful analytically at the community scale. Further, the use of monolithic capital approaches does not facilitate capturing the impact of cross-scale and cross-capital interactions that may take place at the micro-level within local systems where defined capitals may not be useful methodologically. This is especially true in communities such as Mousehole where depth and complexity within its social networks is identified and critical. This has implications when assessing status and process in resilience theory. The identification of micro-level localised processes may be problematic in panarchy terms, as dynamic change is fast and prevalent. Status-based views may then be of increased benefit combined with longitudinal resilience processes by proxy, a focus of this research.

These networks are of significant importance in translating individual and collective thought into action and 'weight' in a community. Social networks and hubs can be viewed as 'resilience-generating institutions' ([Bottrell, 2013](#); [Fine et al., 2010](#)).

Social groups are an important factor building adaptive capacity and to self-organise ([Adger, 2000](#)). Social groups, in themselves, are a source of diversity and are enmeshed in complex interlinkages, expressing both exogenous and endogenous social connections which are dynamic and powerful aspects of a dynamic community 'grapevine'⁶² ([Collier, 2002](#)) which is exhibited strongly in Mousehole. A 'grapevine' may serve as a strong social network factor enabling and influencing social resilience and coping with threats. However it may also be an instrument of community vulnerability e.g. 'lock-in' or rigidity ([Pelling & Manuel-Navarrete, 2011](#)) through power configurations of nepotism and control ([Wilson, 2014](#)). In Polperro, where social networks are weak, the dynamic has shifted to a

⁶² To learn of something informally and unofficially.

more governance-orientated environment. Business interests linked to this rigidity, 'lock-in' and consequent control and power 'imbalances', drive this shift. These 'lock-ins' in recent history were a consequence of fishing communities becoming 'encapsulated' and isolated in primary extraction based fishing communities ([Marshall, 2007a](#)).

Social groups are a feature of communities and not an individual, however, key individuals, or so called 'super-attenders' are very important in rural communities. These individuals may be incomers or indigenous to the community and can facilitate action and create momentum in building 'external' resilience through 'harnessing' and 'building' adaptive capacity ([Shaw, Scully & Hart, 2014, p.197](#)) by linking to the exogenous systems that increasingly influence communities. This is further discussed in Section 7.4.

The separation of the place of work from the place of living forms an important factor in rural and urban environments and the dynamics of social groups. Fishing communities have traditionally been a place of work ([Holen, 2014](#)) as well as a place of living as discussed in Chapter 4, reflected by the architecture and infrastructure in common with many rural communities ([Nas & Wuisman, 2005](#)). Harbour areas themselves have developed partial, or complete creation, of social 'voids' where no one actually 'lives' in holiday, or second homes, in a permanent residential sense ([Farstad, 2013](#)). A major loss to external systems can occur as is the case of Polperro. These voids have been created through second and holiday homes and may create a 'hierarchy of dwelling', further severing the connection between dwelling and community in 'post-fishing' communities. This can fragment community networks and increase vulnerability, 'decoupling' social engagement between groups of 'permanent' inhabitants ([Gallent, 2007](#)) through effective removal. This is most

clearly exhibited in Polperro where a transition to a new type of 'virtual' community is most evident through a declining population of 'core residents' further undermined by a lack of adaptive capacity and options.

Community social groups matter because the 'permanent' inhabitants and families of communities who once occupied the harbour side areas may have become dispersed, or physically marginalised over time. Groups interact across different social and economic scales contributing to the shaping of the community fabric and the 'sense of community'. Types of interaction, and community contribution distinguishes one group from another and becomes the essence of community and of 'dwelling' ([Gallent, 2007](#)) (also see Table 7-2). Groups are consequently less likely to retain contact with active social groups which then also may decline ([Bowles & Gintis, 1998](#)). Bowles ([ibid.](#)) also asserts that parochial communities may also be more likely to foster co-operative behaviour than communities that are not specifically adapted to their environment e.g. 'non-primary' extraction communities. Conversely, social changes may break communities out of stasis or 'lock-in' and long term community tension and power configurations or force adaptive change.

Residents and businesses value the social groups of Mousehole. One local commented on social groups and the importance of social values as a foundation for the community :

"It's not all about the money. Social values and groups are critical to this community. We haven't got what we haven't got."

Mousehole artist/business owner ([MBQ-001](#))

These social values and groups have evolved over generations in these communities by both need and social norms. Resilience as an attribute may benefit some and not others as discussed, for example, formal governance is quite a resilient process in Polperro. However, its impact on the community can be interpreted as socially and perhaps economically unfavourable to the community and careful consideration is required to understand resilience, vulnerability and ramifications to different groups and individuals within a community. Polperro, as indicated, has significant socio-economic vulnerabilities.

In Mousehole, social learning has been a slow-onset process, developed through multiple iterations of adaptive cycles and changes in socio-economic drivers along with increasing exposure to exogenous systems. A status approach cannot make resilience factors meaningful without understanding at least some of the historical processes involved such as the early adoption of tourism in Mousehole and its impact on social life. In this research, longitudinal proxies such as festivals and social change have been adopted as discussed to infer and reflect aspects of resilient change over longer timescales. These proxy inferences, combined with status-based views contribute towards the utility of the status-orientated typology used in this chapter and Chapters 5 and 6.

Mousehole demonstrates strong support for social groups, having around 16 identified social groups compared to five and 12 respectively for Mevagissey and Polperro (see Fig. 7-2). This signifies a community that is actively engaged in its social life, a view supported by observations within the community ([Gallent, 2007](#)). In Mevagissey and Mousehole, relatively low numbers of social clubs are shown in Table 7-2, being five and two social clubs respectively. This may indicate that these communities have not invested as much as Mousehole in their social 'capital' or,

more clearly in the context of this research, community resilience factor characteristics of informal leadership, social groups, hubs and volunteering.

In Mousehole, the number of social groups has declined e.g. scout and guide groups. This resident comments on the loss of the scouting group and the lack of parental support now apparent :

“What happened to the Boy Scouts ? I worked with them, there was always a professional person running it, now no parental support and has disappeared from this community.”

Mousehole resident ([MRI-004](#))

This resident remarks on the loss of the ‘core’ of the community through the conversion of one of the Methodist chapels to a private dwelling and its loss as social core or hub :

“There were two chapels in the community. We could not afford to keep one of them going so it was sold as a private house. All the children went to Sunday school and there were Girl Guides and Boy Scouts. I was a Guide leader and we had 42 girls and ended up with 11, this was because we lost a chapel and the social core was removed, this is a loss to our community.”

Mousehole resident ([MRI-003](#))

This resident sees Mousehole through a ‘community loss’ lens :

“It is very difficult for a person born here to explain the huge difference historically between then and now. It is the way we view it as a community, based in sections, like fishing and religion and chapels. Methodism built the first school, and also the Sunday school choir and the boys and girls Brigade. It still takes several men onshore for every two people at sea in fishing operations, engineers shipwrights, carpenters, plumbers, painters numerous men on the market, drivers to take fish away rope, fishnets, buoys, hooks, it goes on and on. Take all this away is not much left of 'community' I could go on and on and on.”

Mousehole long-time resident and B&B owner ([MRI-001](#))

This is also arguably a loss of diversity within the community and a loss of social 'richness' and 'built' social learning ([Magis, 2010](#)) within formal and informal settings. Strong social networks and linked adaptive capacity are linked to community cohesion ([Magis, 2010](#); [Pfefferbaum et al., 2007](#); [Putnam, 2000](#)) and Mousehole has strength in its strong, numerous and diverse social networks.

Rowing gig clubs are of great social value and combine many elements of Cornish and maritime tradition ([Martindale, 2012](#); [Willett, 2009](#)). Historically, pilot gigs (small oared boats) were rowed out to ships offshore to offload a pilot. The pilot would then transit the ship to port, the gigs also doubling as salvage and rescue vessels. They are now an active 'cultural practitioner' link to the past and have enjoyed a major resurgence across the UK and the globe spanning many scales of interest. Pilot gig clubs are also a feature of most coastal communities in Cornwall and there are around 21 clubs in Cornwall, pilot gig clubs thrive in each of the three case study communities ([CPGA, 2015](#)). This constitutes an extended network or cross-scale collaboration in the pilot gig community. Gig racing now features competitive inter-community racing, especially during maritime festivals and regattas across Cornwall. There exists a strong community element of competition and

adversarial pride between communities, supporting community identity and bonding. Pilot gigs are a unique feature of coastal communities with fishing and maritime heritages. They have undergone a transformative process from their original use as active working boats to a worldwide club phenomenon, centred on Cornwall⁶³ and form a social meeting club for all, and especially newcomers to communities.

Fig. 7-8 shows a classic Cornish rowing gig being prepared for racing practice in Mousehole. These are traditional wooden boats, authentic, hand crafted and highly esteemed from traditional and competitive perspectives. This gig is a 'four seat,' for four rowers and a 'cox' or coxswain, who steers the boat (sitting on the coxswain's seat at the rear). Mousehole has a very active gig club and a dedicated boathouse that was converted from the old lifeboat station (not the Penlee boathouse).



Figure 7-8 : Mousehole rowing gig - Source : ([Author](#))

⁶³ The annual World Pilot Gig Championships take place in the Isles of Scilly that, like Cornwall, are part of the Duchy of Cornwall.

In Mevagissey, one new resident comments on the value of the gig rowing facility for newcomers. This is a good example of social bonding opportunities for newcomers to the community and established residents alike as well as bridging across the wider scales of the gig community :

“Although I am not personally deep-rooted here, fishing is important. Socially I have been lucky enough to take part in Pilot Gig rowing for three years and supported local clubs.”

Mevagissey new resident ([MVQ-7578](#))

Polperro has no social clubs in the harbour area, there are clubs further back up the valley, the (degrading) British Legion and the Gig Rowing Club. Polperro is also the most predominantly commercially orientated of the three case study communities, evidenced by the dense volume of tourists observed during the summer months and the extensive tourist orientated businesses. Of the three communities, Polperro was the most seasonally constrained concerning the number of businesses closed out of the ‘tourist season’, leaving the small remaining indigenous community ‘overwintering’. The significant and seasonal dependence on exogenous economically driven factors influencing tourism has left little scope for developing social clubs, but this is unlikely to be the only reason. Other reasons may lie in the reducing numbers of residents through second and holiday home acquisition, and outward migration discussed in Chapter 4. This is not unusual in Cornwall, evidenced by the diaspora of Cornish ‘Celticity’ across the planet, mainly through mining ([Kennedy, 2013](#)).

All three case communities supported male voice choirs as active community heritage (see Fig. 7-15). Cornwall supports a significant number of male voice choirs

(26) ([CFC, 2015](#)), an active community and heritage attribute and a common characteristic of resource extraction communities such as those engaged in fishing and mining. While choirs and gig racing are, perhaps, typically Cornish, nonetheless they provide an open and self-organised platform for newcomers to join in the community immediately (in the same way as gig clubs) and are valued social 'catalysts' to bring people together informally by inviting people to a bonding activity ([Perkins, Hughey & Speer, 2002](#)). They are a common builder of social resilience in all three communities and are an important regional adaptive phenomenon.

7.2.3 Collaborative working

Collaborative community working was the norm and not the exception in the 19th century as this Percy Craft painting depicts (Fig. 7-9).



Figure 7-9 : Collaborative working in Newlyn - The Tuck Boat - Source : ([Craft, 1897](#))

These fishers pooled their resources, collaborated and self-organised to land a common catch, shared across the community through common endeavour. This culture was driven by need and reciprocity over hundreds of years as a slow-onset adaptation to the needs of the community and the resources available in a primary resource extraction community. Exemplars of collaborative working and self-organisation were evident in the contemporary fieldwork in Mousehole. A photo captured during Easter of 2013 shows fishers from surrounding villages coming together to 'shunt' their fishing boats from their winter land storage to the water for the new season (Fig. 7-10).



Figure 7-10 : Mousehole Fishing Vessel Launching Easter 2013 – Source : ([Author](#))

A local farmer was conscripted to use his tractor to haul around 20 fishing vessels to the water aided by fishers and residents from the area and the locale. This is a communal annual event replicated in other local fishing villages. There are many commonalities between Fig. 7-10 and that of Fig. 7-9. Common working practices, through collaboration, adaptation, self-organisation, reciprocity and trust suggest

strong social resilience, evident in both these images, the reciprocal nature of this culture have remained, even after 200 years. Research suggests that trust “is only understandable in its socio-cultural situation” ([Falk & Kilpatrick, 2000, p.24](#)). This event also marks the start of the summer season for fishing and the influx of visitors at Easter and onwards and constitutes a ritual of reciprocity, trust, co-operation, sociability, and communality. A key point in collaborative community working is that there may be no direct benefit to individuals financially. The benefit is for the greater good of which individuals are valued in their mutual and reciprocal assistance in times of need and resource sharing. This resident expresses the normal nature of such activities in Mousehole :

“Everybody mucks in get stuff done in this community. This is not unique and happens all over the world.”

Mousehole B&B Owner ([MRI-001](#))

These events also suggest a proxy longitudinal view of resilience in Mousehole over longer timescales through a slow-onset process of collaborative working in a co-operative sense, exerting independence at the local scale. This collaborative long-term process can also be observed as a proxy in the legacy of the now defunct fishing co-operative in Mevagissey (see Chapters 5 and 6).

Collaborative working was not an assumed value for many in fishing communities and may have a degree of ‘romantic imaginings’ ([Kennedy & Kingcome, 1998](#)) as discussed in Chapter 5. Collaborative working practices may not have been a norm and may have occurred in time of pragmatic need. Interviews

suggest ([MGI-001](#)) that things have improved in terms of the power configurations projected by the fishers, power now being held by the government and council and not the fishers (in the view of the Harbour Authority at least). This stands in contrast to views of many in the community, but is nonetheless valuable in underpinning the process of transition of local power (e.g. use of harbours and local power configurations) linked to governance elements such as the MMO and the MCA. However, Harbour Authorities have changed little in governance terms for centuries.

Evidence of collaborative working was less prominent in Polperro, with the exception of the Music Festival, and the multifunctional eco-tourist fishing boat owners collaborating at the harbour mouth. These observations suggest that Polperro, as previously iterated, is primarily business led and each business appeared to perform in its own independent sphere with little obvious 'inter-collaboration' taking place. It was apparent that 'business comes first' in Polperro.

In Mevagissey, many examples of collaboration were apparent, notably within the fishing community membership, the MSC, the Harbour Masters Office and the progressive views of the parish council based in the MAC leisure centre. These collaborations can be linked to cultural traits in these communities through slow-onset processes. Communities can be vulnerable through fast-onset events and longer-term impact such as has occurred in Polperro with the degradation of these historical collaborative processes. Indeed a discussion in a Polperro pub one evening prompted an older resident to mention that smuggling is a 'pretty sure sign' of collaboration and adaptation for a very poor community and construed as a resilient trait.

This is important in the comparative consideration of general modern day business practice that does not commonly help ‘business competitors’, even at a local level. This differentiation is highlighted below, framed in social capital :

“Social capital is a gift, in the sense that expectations of repayment amount and timing are not fixed. Two types of donors’ motivations to give exist. Altruistic or consummatory motivations are those in which the donor regards the giving act as an end in itself. Self-interested motivations, in contrast, are those in which the donor regards the giving act as a means towards his interest.

([Torche & Valenzuela, 2011, p.185](#))

Using these two concepts of ‘donor motivation’ as status views, this suggests a more altruistically motivated culture in Mousehole. In Polperro, from several examples in this research (e.g. business-centric governance) there is an inclination towards self-interest driven by business and a declining social environment. Mevagissey exhibits some traits of both of these types of motivation but leans towards collaboration, especially through the fisher community.

7.2.4 Self Sufficiency and Identity

Self-sufficiency as a resilience trait, has long been a practice in Cornish fishing villages through the geographical isolation of many of these communities linked to primary resource extraction such as fish, flowers, ores and aggregates ([Buttery, 2012](#)). Independence and self-sufficiency are also closely identified with notions of being Cornish as the culture developed over centuries ([Kennedy & Kingcome, 1998](#); [Willett, 2009](#)).

Self-sufficiency is viewed as an important aspect of resilient behaviour coupled with theories of localism ([Ewing, Flick & Synolakis, 2010](#); [Hopkins, 2008](#); [Martindale, 2012](#)). Loss of self-sufficiency is not isolated to fishing communities and dependence on exogenous institutions (e.g. services), has diminished this independence for most contemporary Cornish communities. One Mousehole community interview respondent reflected on her youth and their perceived self-sufficiency of that time, strongly linked to self-determinism :

“Even if you didn’t have very much, you could always go and fish, if you needed a gallon of petrol or some medicine, you could still go fish and make a little money, and make your own mind up about how to do it, that is self-sufficiency. Children were safe in the harbour area as the community was watching over them. It is all a matter of trust and this is an issue now. I have never been to work but I have never stopped working, we could make do and adapt then, it is much more difficult to be self-sufficient now.”

Mousehole Resident Interview ([MRI-001](#))

The interviewee expresses a loss of self-sufficiency associated with the loss of fishing, also discussed in Chapter 5. This can be linked to place attachment ([Urquhart, 2012](#)), suggesting a form of slow-onset engagement, the longer a resident stays in a place, the more embedded the actor is likely to become in their community and the greater the extent of social learning that occurs ([Pretty & Ward, 2001](#); [Wilson, 2012a](#)). This can also lead to longitudinal ‘lock-in’ to social power configurations as norms become established that may be a vulnerability at the community scale and resilient at the scale of selective individuals. The quote also conveys a loss of trust in the community care of children, perhaps not isolated to Mousehole ([Morrow, 1999](#); [Putnam, 2000](#); [Tsai & Ghoshal, 1998](#)). Often contradictory accounts of the rural environment as a place of safety for children are

characterised as the rural being simultaneously both safe, and dangerous, for children ([Cloke, 1997](#); [Phillips, 1998](#); [Pratt, 1996](#)). This responder indicates the role of the community in this care and the implication is that this is not as it was, and for the worse.

Importantly self-sufficiency in resilience terms is linked to local panarchies. In the 1900s socio-economic community 'panarchies' (e.g. Mousehole) were not complex systems having limited communications and transport, geographical constraints and local relationships to other systems e.g. the Duchy of Cornwall. In relative contemporary terms, the numbers of external systems have grown immensely. Their interrelationships form a complex network and self-sufficiency has been 'sucked out' of these coastal communities by a multitude of multi-scalar external dependencies. This network development has been slow-onset and the network has become so complex it has formed its own 'lock-in' configuration for these communities. Dependencies also bridge directly to global levels, e.g. diesel costs for fishing boats and international tourism. This is a major criticism of panarchy theory as panarchy does not account for complexities of dependencies jumping across these scalar levels ([Berkes & Ross, 2016](#)), such as in this example. Hence, as discussed, it is preferable to contextualise resilience through basic notions of nested scales of fast and slow systems rather than adopting a panarchy based 'grand theory' that builds on nested systems and imposing a 'scale dependency' lens.

Mevagissey residents also expressed a loss of self-sufficiency. This resident explains connections between the loss of self-sufficiency and the onset of tourism :

“At one time Mevagissey was self-sufficient, with the proverbial butcher, baker and candlestick maker, this is sadly no more. Everyone has to go to St Austell for their main shopping. Social history tells the tale of the loss of self-sufficiency and this loss becomes more orchestrated with the holiday tourists by business not owned locally. It is good for business but that's it, its summer only⁶⁴.

Mevagissey resident and inventor ([VRQ-7150](#))

Mousehole traversed a process of degradation of absorptive capacity through its loss of fishing and took place during the period of frantic property sales in the 1960s, weakening community self-sufficiency through an exogenous panarchy as buying power prevailed.

There is a significant difference between the case communities in self-identifying as a ‘fishing community’. Residents were asked if their community typified their idea of a fishing community ([Appendix A, Question B2](#)). General observations (Fig. 7-11) suggest that Mevagissey residents express strong self-identification of being a fishing community, less so by Polperro, and far less for Mousehole.

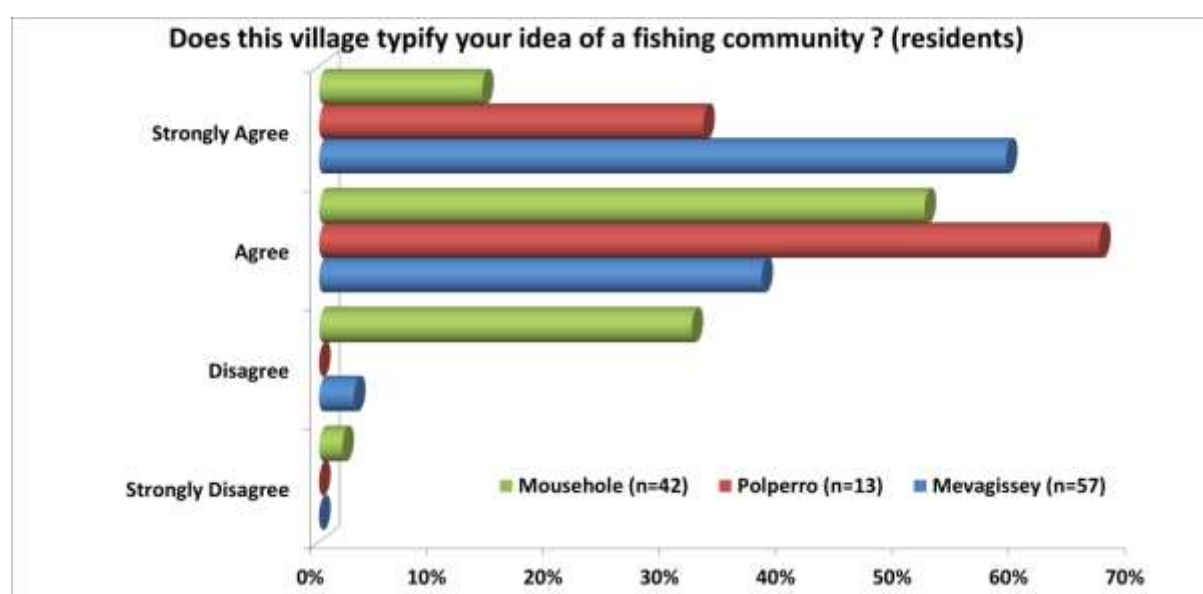


Figure 7-11 : Self-identifying as living in a a typical fishing community - Source : ([Author](#))

⁶⁴ These are seasonality constraints.

Using a cross-community status analysis⁶⁵ of these residential data, there is a significant statistical difference between Mevagissey and both Polperro and Mousehole but not between Polperro and Mousehole. This suggests that Polperro and Mousehole residents have more in common in terms of a personal perception of not being part of a fishing community than those of Mevagissey. This corresponds directly to levels of community fishing activity (as might logically be expected). Fishing activities are low in Mousehole, greater in Polperro and much more significant in Mevagissey.

A sense of deep community attachment to identity and place is suggested by this Mousehole resident, further, that the place the respondent identifies with, has been lost through the slow-onset process of conversion of former residences to holiday homes :

“It is with great sadness that after seventy years I must concede that the place I grew up in no longer exists. Some incomers have contributed a great deal to the village but the fishing community died because of the economic conditions. Now it is a parody of what it was and exploited by holiday home owners.”

Mousehole Resident ([MRQ-037](#))

Other views of residents expressed concern that the longitudinal social history of Mousehole was at risk of being lost forever, and that a museum would serve this need well in identity and heritage terms (see Solomon Browne Hall in Chapter 6). Other responses are more critical of the adopted use of fishing heritage as cynically ‘cashing in’ on the history of Mousehole for business interests by creating a generic and static ‘snapshot in time’ or status based imagery, using this contrived mix of heritage as a commercial ‘lure’ to attract tourists as outlined in Chapter 2. This

⁶⁵ All ANOVA statistical tests are assessed at the 95% CI using IBM SPSS.

imagery masks the reality that Mousehole, from a place-based perspective, was in actuality built through slow-onset processes and had a complex history of change up to the present day :

“Some people are willing to preserve this as a place. Others see it as a developmental and commercial opportunity in order to market a myth.”

Mousehole Resident ([MRQ-274](#))

In Mousehole, family ties are still strongly evident and part of the traditional Cornish aspects of culture, social memory and networks. The respondent below suggests how strong intrinsic values linked to the importance of family and identity contrasts are important rather than through their employment status. This is a strong expression of retained cultural identity in this tightly-knit ‘family-centric’ community :

“The difference here is not ‘What do you do ?’, or ‘How much money you have ?’. You are asked questions like ‘What are you called ?’ and ‘What was your grandfather’s name ?’. Then I know who you are. In other parts of the country they will ask you ‘What do you do for a living ?’. Can you see the difference ?”

Mousehole Resident ([MRI-001](#))

This provides some support for the notion of ensuing threats to traditional networks through changes in social networks associated with cultural change incurred through gentrification discussed in Chapter 6 ([Laviolette & Baird, 2011](#); [Willett, 2009](#)). This can be linked to decision-making configurations and pathways influenced through new elements of power configurations and social networks.

Self-perception of fishing heritage and social identity are expressed differently across the case communities (see Fig. 7-12). There was little disagreement in these data with the proposition that fishing heritage is part of the social identity of the respective communities. The prime difference observed in Fig. 7-12 is that, while Polperro and Mevagissey express strong agreement to the proposition, Mousehole residents express less strong agreement that fishing heritage is part of their social identity.

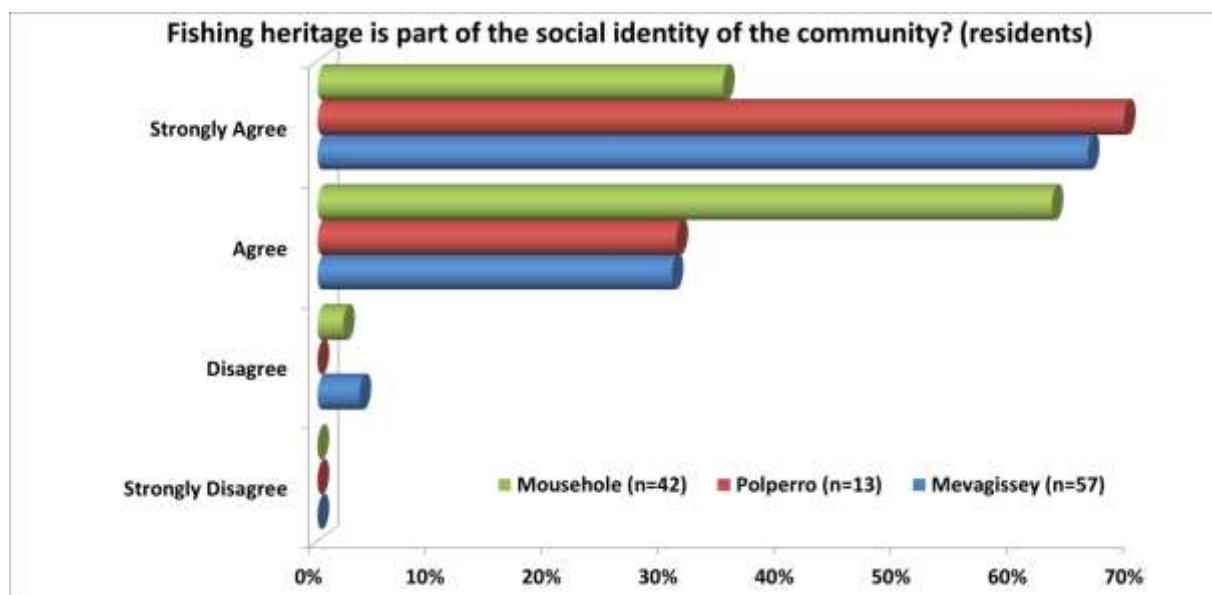


Figure 7-12 : Fishing heritage and social identity - Source : [\(Author\)](#)

This perception makes sense in consideration of the abrupt fast-onset process loss of fishing to Newlyn in the 1930s. However, fishing was very much a part of Mousehole history prior to this and the absence of heritage sites in Mousehole may partially explain a lower community association with fishing heritage.

7.2.5 In-migration, social acceptance and out-migration

The numbers of incomers from other social systems into traditional Cornish fishing communities accelerated after the expansion of the transport infrastructure during Victorian times and beyond as discussed in Chapter 5. Large-scale in-migration into Cornwall has been associated with an economy in decline and Cornwall has taken on the population increase but, notably, has not shown accompanying economic growth ([Willett, 2009](#)). Evidence suggests that incomers have not stimulated economic growth in Cornwall and that Cornwall has not generated enough jobs to support its 'indigenous' population and there is no surplus of jobs available for in-migrants ([Williams, 2008](#)). Research suggests that social and economic imperatives are both important for incomers moving into rural communities. Further that there is a more nuanced relationship with these when individuals move in with expectations and motivations derived from contrasting social systems at variance with those of an embedded population ([Granovetter, 1985](#)).

Incomers, many escaping from modern trappings and urban lives, can influence economic development as well as social change in fishing communities. This may depend on their attitudes towards the 'receiving' community and the degree to which they project characteristics of exogenous systems or panarchies. The degree to which in-migrants 'locally embed' into a community depends on their aspirations, influence and respect. Perceptions, expectations and the perception of the 'destination' may influence the likelihood of subsequent behaviour ([Bosworth & Willett, 2011](#)) and likely driven by the attractive nature of fishing communities from a cultural perspective. This is further characterised by Bosworth and Willett ([ibid.](#)), who suggest that counterurbanisers who both understand and engage with the local community are better positioned to introduce new types of human and social capital.

Further, that they can provide valuable connections beyond the local area to different scales and panarchies. This is an important point in communities as communities may be limited in how extant community agency projects across to other scales and systems. Examples of this are direct funding from the EU and The National Lottery in Mevagissey and Mousehole respectively. This 'reaching out' can circumvent power configurations and can be a positive aspect of in-migration building resilience.

The 'rural idyll' that is a prime attractant for incomers, drawing them away from e.g. modern urban lifestyles, is an imagery that is in stark contrast with the often concealed reality of Cornwall and its high levels of deprivation. This is linked to the low likelihood that incomers can become economic development 'catalysts' with some exceptions ([Bosworth & Willett, ibid](#)).

Social issues within the Mousehole of today are not atypical of coastal communities. As highlighted in Chapter 6, the proliferation of second and holiday homes has brought many changes to Mousehole over the last 30 years and the community reflects strong feelings on the integrity and the 'arrogance' and 'brashness' of some incomers in how, or if, they attempt to integrate with the 'indigenous' population. Some incomer aspirations can often be at odds with existing members of the community and lead to tensions as mentioned. This is balanced to some degree by other incomers bringing enthusiasm and novel skills. Examples of social conflict have been illustrated in Chapter 4 such as issues of self-entitlement and the importance of a willingness of newcomers to adopt at least some of the extant community values and traditions ([Yang, Ryan & Zhang, 2013](#)). Examples of in-migrant linked conflict in Mousehole include the impact of second/holiday homes and newcomers 'stepping over' social and cultural 'boundaries'.

A long standing and respected member of the community expressed many of the traditional values of the community. Asked about how newcomers integrate into the Mousehole community, the interviewee professed to recognising three main 'types' of incomer :

"Firstly, them who stay in their houses and don't talk to the natives at all. Then secondly, them who wonder how we survived without them, they think they are entitled. They ask questions like why haven't you got this why haven't you got that ? My response is that I don't want it and don't need it so why are you asking me ? You came down here because you liked it to why would you want to change it ?. What attracts people and why change it to where you came from ? People don't really think, they just wade in, this is not an office this is our home ! Then thirdly those who are not brash, not pushy, these are the middle ground and this works well."

Mousehole Resident Interview ([MRI-001](#))

There are strong elements of 'socio-psychological conservatism' ([Wilson, 2012a, p.128](#)) apparent in the way that change and influence from incomers is interpreted by this Mousehole resident. This may be a contributing factor of 'lock-in' and power configurations by the community and its members. This may lead to introspectiveness and a reluctance to consider or adopt new ideas ([Bosworth & Willett, 2011](#); [Uzzi, 1997](#)). The interviewee's three 'status type' responses are interesting for several reasons.

Firstly is the implication that people move in and then keep themselves to themselves without interacting to any extent with other village residents. This is akin in some ways to the initial stages of gated community formation, wherein people may live next door to each other but never converse. The notion of a talking community may not be a normative concept for some individuals and that is a matter of choice.

However, from a community perspective engagement is important in resilience terms. This may lead to slow-onset change that is not apparent but can manifest itself by lack of community activities and a degrading social network.

Secondly, is the notion that incomers bringing new values into the community 'where they are not wanted' possibly threatens established identities ([Spain, 1993](#)) in attempts to transform the community in some way. This may highlight a paradox between an apparent liking of Mousehole as a basis for moving into the community, and then driving change contrary to the wishes of more established residents. This comment implies disrespect for extant residents by incomers.

The third point raised in this interview quote implies an acceptable 'middle ground' to the respondent where community values are respected as well as an opportunity for incomers to be accepted. This implies a notion of 'absorption' of a person into the community 'fabric' and is perhaps the most acceptable 'type' of incomer in community terms. It needs to be stated that these 'types' are not mutually exclusive, people can be many things at many times, but this does present some interesting comparisons as a state view.

The interviewee's response concerning 'wading in' is also reflected in many other negative views of incomers in the data through an apparent disregard of the cultural 'ways' of the community. This can lead to people leaving the community, as observed in the following interview comment referring to 'brash' behaviour by incomers :

"They doesn't stay long if they make that mistake."

Mousehole Resident ([MRI-014](#))

Views were also expressed of a dislike for 'self-hierarchy' as a cultural tradition in Mousehole, with people who become too 'uppity' being 'taken down a peg or two'⁶⁶ ([MRI-007](#)). This suggests that collaboration is reinforced through a 'flat' social domain and, again, this is an insight into why and how the values of incomers can fall foul of the views of indigenous residents ([Spain, 1993](#)). This may form a social resilience aspect of the relationship between collaboration, bonding, reciprocity and social equality from the needs of the community in times of natural resource dependency ([Tompkins, Adger & Brown, 2002](#); [Tompkins & Adger, 2004](#)). Bonding is a social resilience trait through the Mousehole community lens, but bridging is no less important in the increasing community heterogeneity that all the case communities encounter. Bridging is critical in creating social interconnections to other pararchies and systems e.g. Mousehole, Newlyn and Penzance as an extended 'community'.

7.2.6 Festivals

Festivals are traditional events in many fishing communities, and investment in social capital occurs through festivals ([Acott, 2011](#); [Urquhart & Acott, 2014](#)) e.g. the US Gulf of Maine, ([Claesson, Robertson & Hall-Arber](#)). Festivals build on social and cultural capital providing economic benefit ([Rao, 2001](#)) through heritage tourism and provides insight into the symbolic, religious, and socio-cultural significance of communities. Festival activities are usually framed financially, from a broader viewpoint they build social capital and enhance the community fabric and sense of place in place-based studies ([e.g. Huijbens, 2012](#)). Festivals may alleviate

⁶⁶ 'Uppity' is vernacular for pomposity, 'taken down a peg or two' is to be shown that pomposity is not socially acceptable.

community tensions through celebration and a bringing together of people, in turn shared with people of other communities ([Derrett, 2002](#); [Derrett, 2003](#)). Festivals can also play an important role in “resisting, redistributing, or overturning dominant patterns of power in ways that contribute to human emancipation and social justice” ([Jepson, 2015, p.217](#)).

Festivals can influence policy as a community development and diversification driver but notably attract negligible or no funding from the UK Government purse. This is in stark contrast to France who support over 1,000 festivals from the public purse to a lesser or major degree ([UNESCO, 2015](#)). The world famous Brest Maritime Festival ([BrestFetes, 2016](#)) is a key example of how public policy and funding benefits community business and social interests in stark contrast to the UK governments continuing and obvious disinterest in supporting community festivals in UK coastal communities.

Festivals are important in social resilience terms as having deep symbolic, social, economic and natural domain influence across fishing communities. This is true in longitudinal terms as well as annual extensive preparations for festivals themselves ([Acott, 2011](#); [Urquhart & Acott, 2014](#); [Wilson, 2015a](#)). Festivals as evolutionary developments vary in relative slow and fast-onset terms. Seafood and fishing orientated events are separated in some large scale research ([Claesson, Robertson & Hall-Arber](#)). This is not the case in this research, as they are inevitably both involved in Cornish festivals as well as contributing to authenticity and unique local ‘flavours’ e.g. the Christmas Lights in Mousehole, the Music festival in Polperro and the Feast Week of Mevagissey. The Mevagissey Feast week is much focussed on fish and fishing heritage. Piracy is an evergreen theme in Cornwall, especially in Polperro and celebrated in its Music Festival although it could more authentically use

its authentic history of smuggling in its thematic portrayal. Festivals in Cornwall have been a tradition, for perhaps a thousand years, and are run and managed locally in Cornwall on an endogenous basis, in contrast to the federally managed example of the Gulf of Maine discussed earlier ([Claesson, Robertson & Hall-Arber](#)). Festivals attract large numbers of tourists, and local and regional visitors. Cornish maritime festivals are usually timed to prevent 'date clashes' and move in a temporal wave progressing across the peninsula from early to later summer. These coastal festivals support many critical factors in fishing community social resilience through multiple factors of identity, bonding, bridging, collaboration, efficacy, tradition along with community cohesion, trust and stewardship of the community and the sea itself ([Hale, 2001](#); [Urquhart & Acott, 2014](#)). Perhaps more than any other single type of event in coastal fishing communities, festivals characterise the joy and cohesiveness of fish, fishers and the community and, in themselves, characterise social resilience through these multiple factors.

Mousehole hosts two major festivals, firstly the bi-annual Sea, Salt and Sail Festival ([Pezzack, 2014](#)) which is a celebration of traditional boats and maritime history. Secondly, is the Mousehole Christmas Lights Festival ([Mousehole-Lights, 2014](#)). This festival was started in 1963 when a local artist strung up some electric lights that Christmas on the harbour walls. This slowly evolved over the years into imaginative artistic light displays illuminating the harbour front and the close offshore island every Christmas.

This world famous lights festival is combined with a celebration of the folk-lore of the legendary Mousehole resident, Tom Bawcock, who lifted the (then) famine of the village by going out to sea to fish in a severe storm, reputedly landing seven types of fish ([CooksInfo, 2015](#)). This is celebrated every Christmas by a celebration

of lanterns and lights and the traditional ceremonial, and symbolic, eating of the iconic Stargazy Pie (Fig. 7-13) cooked with Cornish sardines⁶⁷, herring or mackerel.



Figure 7-13 : Stargazy pie - Source : ([Guardian, 2012a](#))

These traditions support social resilience through the social memory of Mousehole, bringing intrigue and interest from visitors and social bonding between residents.

The Mousehole Sea, Salt and Sails festival organises traditional, authentic and once working boats, to be brought into the harbour constituting firstly, an important heritage narrative of the maritime history of the Mounts Bay area ([Pezzack, 2014](#)). Secondly, the festival provides valuable footfall and business income from festival attendees ([MBI-001](#)) and, thirdly, the community is mobilised into active collaborations, self-organisation and participation through the celebration of their shared local heritage ([MRI-004](#)).

⁶⁷ Pilchards.

Fig. 7-14 depicts the richly colourful fish themed Mevagissey Feast Week. Mevagissey has an annual summer festival to celebrate its fishing heritage, the Mevagissey Feast Week held in July annually.



Figure 7-14 : Mevagissey feast week 2013 - Source : ([Adams-Marks, 2014](#))

Figure 7-14 shows the procession joy of Feast Week. This image shows an interpretation of a bright and cheerful 'fish' followed by an orange 'lobster' carried by children, examples of both bonding and bridging within the community. The image also shows the wooden-boat builder's yard, historic museum, a retired lifeboat, the slipway and the joyful celebration, participation and engagement of community members and visitors alike. The decommissioned lifeboat to the left of the museum sign is one of several heritage conservation projects underway.

Feast week is a colourful and vibrant festival and the festival provides a key focus for the community and is a unique event celebrated by the whole community showcasing Mevagissey. One fisher ([VFI-001](#)) was in the process of collaborating with the BBC and Leeds University in the production of a film on commercial fishing and projected his footage at the festival. Mevagissey residents are rightly enthusiastic and proud of their Feast Week, as noted by these two Mevagissey residents :

“This little village, it is driven by very active fishing fleet and also feast week the fishing festival. This is evident everywhere with the strong social and community links to fishing.”

Mevagissey resident ([VRI-7606](#))

“Fish festival is May and June each year. Christmas lights parade is adored for being around the harbour with sea shanties etc. people love the reality and romance of it all.”

Mevagissey resident ([VRI-7576](#))

The Mevagissey feast week is a chance to celebrate the community and the heritage of fishing through partying and *bonhomie* between visitors and locals alike. There is also a small December Christmas festival of lights that is more of a personal celebration within the community. Self-deprecation is a singular characteristic of Cornish humour characterised through the ‘Golden Maggot’ tradition’ :

“The fishing festival is very important as is the Golden Maggot given at Christmas to the fishers who has made the worst and silliest mistake. Mevagissey people are fiercely proud to come from Mevagissey we have had a purpose since the 14th century. The next fisher to get the Maggot is a landlord, which is excellent.”

Mevagissey resident ([VRI-7314](#))

This is also a major period for the business community and augments the lean times of winter. The businesses of Mevagissey actively promote Feast Week. Informal conversations with landlords and other business owners revealed a range of multiples of three to eight times the average weekly turnover during the Feast Week. Clearly, this provides an economic boost to the community and is a social participative spectacle. It is evident that the community benefits greatly financially and emotionally and the whole town is in a quiet state of post-party 'hangover' the following one or two weeks. In resilience terms, this festival can be viewed as a key driver of strong resilience through adaptive capacity building highlighting the fishing past and present. This links heritage to contemporary issues of fish and fishing through reciprocity and community collaboration and reinforces the identity of the community through a fishing narrative in this active fishing community (see Chapter 5).

Polperro hosts an Arts and Music festival each year in June, revived relatively recently in 1996 focussed mainly on art and music with some maritime themes. It also involves a political parody of a mock mayor carried through the village, having a beer in each pub, before being thrown into the harbour, an invention of recent times. Polperro has a significantly different festival theme than Mousehole and Mevagissey in that it specifically holds a Blues Music and Arts Festival. This festival has an arts theme with a maritime flavour. However, while the Polperro music and art festival may have some local connections, it does not truly express the heritage narrative and dedication to the sea, seafood, and fishing that is portrayed in the other two communities in their festivals. This suggests a more 'generic' or heterogeneous commercial alignment with festivals which is also manifested in the general business focussed approach and the relatively weak social domain in Polperro.

The Mousehole and Mevagissey community festivals predominantly express a more organic or localised, maritime expression of identity relative to the Polperro festival. It may be that, in system terms, Polperro has responded to economic drivers from larger external systems in the type of festival it offers in order to gain a larger slice of the tourism 'pie' rather than focussing on local and regional attendees. The Polperro festival is 'stylistically' driven though a need for exogenous attraction to tourists and has 'shaped' its festival to respond to what it believes to work in attracting tourists, rather than through its obvious roots and identity. For example, Polperro has adopted a generic Cornwall pirate festival theme when it could have promoted its authentic smuggling history in a more organic way. Polperro could use what it already has more effectively using its 'real' cultural background, a notion expressed in general Cornish terms discussed in Chapter 2 ([Willett, 2009](#)). This assertion corresponds with the business culture of the community reaching out and responding to external 'business drivers' and thus neglecting its cultural roots.

However, in Mousehole, it already has many international as well as local visitors to its three festivals (thus a higher exposure to wider scales and panarchies) and has already diversified to provide a rich festival offering for many visitors gained from reputation and social efforts rather than apparent 'stylised' direct marketing, which is the case in Polperro. The stylised response by the Polperro Music Festival (takes place mid-June) may be associated with competition from the very successful Looe Music festival that takes place in late September and features major musical acts. The two communities are less than five miles apart. However, Looe has a long beach, infrastructure and vehicular access to support this festival, Polperro does not and this influences the success of the Polperro Music Festival in attracting visitors.

This also reflects that Mousehole was an early adopter of tourism and was lucky enough to learn its lessons early without ‘sacrificing’ its ‘organic’ culture.

These two approaches are very different and may explain why Mousehole has retained this more organic and local expression of identity in its festivals. In Mevagissey, the festival culture is similar to Mousehole as being culturally organic and local, especially through the core theme of local fish. This links historical notions of Mevagissey fishing with contemporary organic views of the community. Mevagissey celebrates fish and fishing which appeals to many visitors and locals alike, again driven through local scale community initiatives.

Thus, Mousehole and Mevagissey festivals express a higher degree of independence as local, organic systems relative to larger external systems, or panarchies, than Polperro. If festival events were threatened in these coastal communities, it would be Polperro that would likely suffer most as a community through its ‘Disneyfied’ festival ([Kennedy & Kingcome, 1998](#)). Polperro would also likely suffer as a consequence of its extreme reliance on tourism, its ‘rigidity’ and its degraded social adaptive capacity.

Singing features strongly in many communities with historic connections to primary extraction industries, from mining to fishing and is an important cultural connection with history, the sea, tragedy, celebration and social memory. The Mousehole Male Voice Choir is seen performing outside the Mousehole Rowing Club in Fig. 7-15 (yellow box). The white box highlights the dedicated Mousehole (Gig) Rowing Club discussed earlier in this chapter. Polperro and Mevagissey also host their own male voice choirs, which is a common feature in Cornwall exemplified by the famous ‘Fisherman’s Friends’ of Port Isaac ([FFS, 2016](#)).



Figure 7-15 : Mousehole Male Voice Choir 2013 - Source : ([Author](#))

Social events are common in Mousehole and Mevagissey such as quizzes, wakes, dances, birthdays, rummage sales, and wedding anniversaries taking place in the various social clubs, pubs, church halls and village halls, with the British Legion being a strong 'hub' in Mousehole and the MSC being a strong 'hub' in Mevagissey. Social events were much less apparent in Polperro, even in the summer months, and the British Legion has seen a major downturn in use in recent years ([Polperro, 2015](#)). This supports the view that social events are weak along with social networks in Polperro. Mousehole and Mevagissey have a stronger and more resilient social presence throughout the year (see Chapter 8).

7.3 Event memory

7.3.1 Disasters and mourning

Observations of the social aftermath of the recent Asian tsunami reflected the resilience of coastal communities to trauma and mortality, suggesting that communities respond in a more positive way to unique individual, social and spiritual coping strategies than formal mental health services ([Rajkumar, Premkumar & Tharyan, 2008](#)). This suggests that the adoption of extant and endogenous social memory and community initiatives may promote community resilience in more beneficial ways than exogenous formal agency. This is supported by a Dutch study suggesting that counselling may do 'more harm than good' to trauma victims ([Highfield, 2002](#)). Rajkumar ([ibid](#)) asserts that such massive trauma need not result in social collapse but may include positive results such as moving the focus from human communal conflicts towards community cohesion, evident in the case examples cited previously.

Coastal fishing communities have faced the extremes of the sea for millennia and fishing remains an extremely high mortality livelihood as discussed in Chapter 5, as is being a member of a lifeboat crew. In all three case study communities, responses to mortality at sea are typified through a wide community impact. This might be expected from coastal communities which are intimately and deeply connected to the sea both physically and emotionally ([Hole, 1967](#); [Thomson, 2006](#)) through slow-onset processes over hundreds of years. The ritual and taboos practiced by fishers and sailors convey the ultimate respect and connection for the sea held by coastal peoples ([Highfield, 2002](#); [Rajkumar, Premkumar & Tharyan, 2008](#)). Regardless of the separation of materiality from notions of representation and

that of competing notions of authenticity of fishing communities ([Brookfield, 2005](#); [Ross, 2013](#); [Ross, 2015](#)), loss of life at sea triggers a community response in fishing communities, and usually impact communities over long timescales from an initially fast-onset event ([Martindale, 2012](#)). This resident captures community mourning succinctly :

“Fishing ports are always the same. When one is lost the whole lot mourn.”

Mevagissey Resident Interview ([from : Cornish Guardian, 2012b](#))

Coal mining is arguably the most dangerous livelihood aggregated globally, whilst fishing is the most dangerous marine based livelihood and both share unique rituals and taboos. Community mourning is a shared ritual custom in both types of primary resource extraction community ([Poggie & Pollnac, 1988](#)) and research suggests that taboos are a prohibitive element of community behaviour discussed in Chapter 2. Taboos are those rites traditionally and ritually carried to guard against loss of life at sea in many fishing communities are part of an intergenerational knowledge and a slow-onset adaptive cultural continuum ([Colding & Folke, 2001](#); [Masalu, 2010](#)). Taboos can be seen as a process to relieve anxiety, build resilience through bonding and to promote co-operation by communicating a willingness to accept traditional patterns of ‘authority’ or mutuality within a group e.g. fishers. Taboos are frequently exercised as ritual processes before going to sea where intensive cooperation between individuals is crucial to the lives of fishers and their dependents onshore ([Palmer, 1989](#)). These taboos form part of fishers identities and can be viewed as part of the community ‘glue’ that links people to the sea, the proximity of danger and the otherness of fishers when offshore. Taboos often arise

from deep experience. Taboos are beliefs and are neither talk nor behaviour but are internal states that challenge identification through human senses and are part of the belief system surrounding fishing ([Palmer, 1989, p.62](#)). Taboos support social cohesion through shared belief between fishers in an often hostile and lonely environment.

In the tightly knit and deeply family-connected community of Mousehole, some events indelibly imprint themselves on the community 'soul', or its collective social memory. Such a memory was articulated through the unfolding events of one tragic night in Mousehole in 1981, a poignant example of community cohesion painted through the following event :

The Solomon Browne Tragedy

“The excitement of Christmas was rising in Mousehole, it was December 17th 1981, Charlie Greenhough, the landlord of the Ship Inn and long-serving lifeboat crew member enthused in switching on the historic Mousehole Christmas lights, community spirits were rising. Two days later, on the night of 19th December 1981, a shout went up, and four lifeboats were launched, from Penlee, St Mary’s in the Scilly Isles, Sennen Cove and the Lizard ([Sagar-Fenton, 1991, p.8](#)). It was the Penlee Lifeboat, the Solomon Browne, stationed in Mousehole, was first to arrive at the scene of the floundering coaster, the Union Star, after its engines had failed in heavy seas close to Lamorna Cove, a massively violent storm, of hurricane scale, Beaufort force twelve (highest) had reared its deadly head. Waves of up to 60 feet and winds of 100 mph had turned what was the sea, into a maelstrom. A brave battle to save life ensued, the Penlee lifeboat crew managed to rescue four people before, in the violence of the force twelve storm, the lifeboat was driven onto the coaster and both vessels were lost with all hands. In all, sixteen people died including eight volunteer life-boatmen, all from the single community of Mousehole” ([Buttery, 2012](#)).



Box 7-1 : Solomon Browne Tragedy - Source : ([Field data](#))

The shock to the people of Mousehole was numbing, profound, deep and incisive, creating a dreadful social shock that gradually manifested itself as slow-onset social memory. Local and national scale fundraising accrued the huge sum of £3 million for the families of those lost at sea, distributed among the eight families, a

huge amount of money in a poor fishing village in 1981. However, this could never fill the gap left by the disaster. 2006 saw the making of a poignant television documentary recounting the fateful day 'The Cruel Sea: The Penlee Disaster' ([Thomson, 2006](#)). After the film was made, one of the contributing journalists conveyed the human impact of the disaster, having spoken and felt the grief of the community :

"I used to long, as a journalist, that I would get a world exclusive. I got my wish, but it broke my heart."

Andrew Besley, journalist ([Besley, 2006, p.1](#))

The event has left its mark on the community in many ways. The event became slowly embedded and reflected within the community in multiple guises. This was principally through photographic artefacts in the Ship Inn, the home of the landlord and lifeboat crew member, Charles Greenhaugh, who perished in the disaster. The Penlee disaster is commemorated annually for one hour in Mousehole as a dedicated community ritual for the lost crew:

"Every year on the anniversary of the Penlee disaster, between nine and ten in the evening, all, and I mean every light in the village, except the island cross and the cross with the two angels on Ragannis Hill are extinguished."

Mousehole Resident ([MRQ-012](#))

The family names of the lifeboat crew echoed the family names of many people encountered in the research, some examples range from B&B owner ([MRI-001](#)), and the car parking attendant to the iconic and recently deceased Harbour

Master⁶⁸ ([MGI-011](#)) who was “Mousehole’s last old sea dog” ([Scott, 2014, p.1](#)). These families are intrinsically connected to the Penlee disaster through community and social memory. Mousehole remains a very close community with strong social beliefs developed over generations. These family names that echo the Penlee disaster and it is the ‘unsaid’ which appears to dominate above the ‘said’ in the community narrative for this event. The evidence of the Penlee disaster was not at the forefront of conversations observed in the community and hence these perceptions are very much observed rather than evidenced :

“The Penlee disaster evokes a strong memory of the seafaring past and the community, the Ship Inn is full of photos of the disaster which is a shrine to the bravery of those men.”

Mousehole resident ([MRQ-103](#))

The researcher perceived a social sensitivity in the importance of keeping a deserved respect for those lost but certainly not forgotten. One resident sharply focussed the mind of the interviewer with the enduring memory and the pain of the event having saved a sweater of one of the lost crew and being one of the few observers of the last glimpses of the lifeboat before it foundered ([MRI-001](#)). As a mark of this respect, the Old Penlee Lifeboat House was closed for thirty years in memorial to the crew and recently opened by the RNLI to the public in 2014. The RNLI was so moved by the event that they left the building as a memorial. The Penlee Lifeboat Station, as an operational unit, not the building, was moved to neighbouring Newlyn in 1983, retaining the famous Penlee name as a tribute to those lost that fateful night ([Cornishman, 2014a](#)). As a social process, although the

⁶⁸ At the time of thesis publication.

generation that was directly involved in the disaster are gradually thinning out, the event loses none of its power as a community narrative and the nation mourned as well as the community. On one occasion in a pub, the researcher overheard a comment made by a tourist alluding to the Penlee event being used as a tourist 'device', the visitor was very severely rebuked by a local woman in extremely strong terms. The tragedy is not an imaginary; it has retained solidity in its emotional reality in the community.

In resilience and anthropological terms, the sharing of grief is an expression of a process of building social resilience through community cohesion and bonding by sharing its vulnerability through common agency through a common expression of emotional support. Bridging and bonding theory ([Putnam, 2002](#); [Putnam, 2000](#)) has direct social capital relevance in times of tragedy such as this, and the community had a tendency to move away from looser bridging to tighter, more visceral types of relationship through bonding. This increased bonding may change the dynamics of longer-term slow-onset social resilience as a positive contribution to social memory and coping within the community, even in death. These mutual coping strategies, based on long term social and cultural memory are likely factors in social resilience.

From the quantitative residential questionnaires, the lifeboat disaster was raised, without solicitation by 14% of the Mousehole residents (n=42) and 100% of the business returns (n=4). This suggests a distinct contemporary awareness of the tragedy, even a third of a century later.

Pilchard fishing has seen human tragedy during its resurgence as the Cornish Sardine. In December 2011, a Mevagissey fishing boat, allegedly overloaded with pilchards through novel methods of ring-netting, capsized. One crewmember lost his life but the skipper survived. This event is now the subject of a prosecution alleging

that the adaptive change on the boat to ring netting caused overloading through neglect, leading to its capsizing and subsequent loss of life. This was the first loss of life on a Mevagissey boat through fishing for a quarter of a century. 450 people honoured the fisher's death on the quayside prior to the funeral. A plaque on the quay now sits in commemoration, a physical fulfilment of social memory to mark out the event and hold it the social memory of Mevagissey over the long term.

All unexpected death is tragic. However, the reaction of fishing communities typically signals a call to action to react positively in the face of social trauma. Daniel Kebble of Polperro set out to catch cod in his eight metre fishing boat, 'Harbour Lights', as night fell on the 8th January 2000. He did not return, his broken boat was found, his body was not. Five hundred people turned up for his funeral. He was not, by some accounts, wearing a lifejacket. The Harbour Master started a campaign to promote the wearing of lifejackets, whether solo fishing or accompanied. The traditional 'macho' habit which was embedded as a slow-onset process over generations of fishers that did not wear lifejackets, was turned on its head in an instant ([PGI-001](#)).

Coping strategies in coastal communities are thus not isolated to the scale of family and friends; they tend to have short and long-term social memory tenure at the community scale, and beyond, especially in death at sea. This expresses a social process of close bonding that reflects the value of life and relationships in a community.

7.3.2 Traditional crafts

Social memory can be physically triggered by olfactory, tactile and visual experiences ([Willander & Larsson, 2007](#)). One such trigger is the resinous pine scent

of a working wooden boat yard such as that situated in Mevagissey harbour quay drawing in the researcher during the field study. This is a traditional boat builders shop and run by a son in partnership with his father in 1978. Their business is repairing and manufacturing traditional wooden fishing and leisure boats, an example being the classic gaff sloop, White Rose, depicted in Figure 7-16.



Figure 7-16 : White Rose of Mevagissey - Source : ([Author](#))

The retention of these traditional wooden boatbuilding skills allows most of the current fishing fleet to continue operating in Mevagissey as they are predominantly of wooden build. This conveys an important aspect of the slow-onset longitudinal resilience of both fishing heritage and the fishing fleet through this traditional craft presence in the community. The business provides jobs and, all importantly, the experience and sensation of a working traditional wooden boat shop. This expresses

the continuum of historic social fishing networks to the present day of the artisans who build and maintain boats, skills shaped over centuries and not curated to museum status and they are socio-economically alive and driven through functional need and interest in conserving traditional boat culture. The boat shop shares a wall with the museum providing physical as well as visual continuity ([Acott, 2011](#); [Urquhart & Acott, 2014](#)) and connection. These traditional skills are resilience factors in the context of these 'real' practitioners. This linkage between active fishing, traditional skills and heritage is a real intrinsic characteristic. A lack of these active skills suggests that a fishing community may be moving towards a transitional process to become a slow-onset 'virtual' cultural icon in combination with a reduced dependency on fishing ([Brookfield, 2005](#)). Boat building forges links between the past and the present and is a key example of fishing heritage contributing towards the social and economic capital of Mevagissey, and to some degree, natural capital through the use of sustainable wood and the avoidance of plastics. The contribution of traditional skills relates to multiple resilience drivers through social memory, social learning and intergenerational skill retention ([Wilson, 2015a](#)).

There are no boatyards in the communities of Mousehole and Polperro. Boatyards that build and maintain wooden vessels constitute the last semblances of marine manufacturing and maintenance industry retained within Cornish fishing villages. This conveys a longstanding heritage and is symbolic of traditional crafts whilst providing an allegory connecting the proud maritime tradition of Cornwall to contemporary values as a continuum, built as a slow-onset process.

Fig. 7-17 shows a local man in his home built coracle. This is a traditional and resurgent vessel in Cornwall and part of the strong movement to conserve and sail

traditional wooden craft in Cornwall ([NMMC, 2015](#)) exemplified in the Sea, Salt and Sails festival discussed earlier.



Figure 7-17 : Local coracle in Mousehole - Source : ([Author](#))

This is important in resilience terms in maintaining active heritage and identity in fishing communities in these case studies.

7.3.3 Iconography of fishing

The theory of iconography, embedded in structuralism, pays particular attention to the context in which an image is produced and circulated through its cultural meanings and the historical basis of its visual expression ([Jewitt & Van Leeuwen, 2001](#)). Barthian semiotic theory studies the image itself, hidden and acculturated meanings as a vocabulary or currency ([Barthes, 1977](#); [Eco, 1986](#)). Iconography, as an expression of the imagery of fishing is useful in capturing how a community (and its businesses) express connections with its past, for many different reasons, for example, through artistic expression, community and individual identity, a sense of place and through business drivers ([Corkeron, 2004](#)). Its contextual value in social resilience is an expression of how a community expresses its identity and

'markets' itself through fishing and fishing heritage through cross-scale interactions between residents, business and tourists, including terrestrial and marine iconography. This imagery can develop over generations or may be more fast-onset, depending on how and importantly, why imagery is expressed or imagined e.g. through tourist business drivers.

An example of this expression is the symbolic representation of fish and the iconic value of fish such as mackerel forming a visual continuum with the ocean. This iconography is also represented through festivals discussed earlier in this chapter e.g. The 'Stargazy' pie of Mousehole (see Fig. 7-13).

To recap from Chapter 5, fishing communities have a long tradition of symbolic identification with the cultural practice of fishing ([Brookfield, 2005](#)). Contemporary fishing communities utilise this cultural heritage in complex and varying degrees of notions of identity and place-based contexts, and in pursuit of tourism business development ([Howard & Pinder, 2003](#)). This may lead to a community dependency 'spectral' shift from fishing to the heritage economy through tourism as discussed in previous chapters ([Brookfield, 2005](#); [Ross, 2013](#)). The iconic imagery of fish and fishing may vary according to the desire of a community to express this identity and cultural heritage from an intrinsic self-identification ([Elliott-White & Finn, 1997](#)).

This section focusses on the iconography of fishing and how it is expressed within the case study communities. This is firstly undertaken as to how fishing is expressed through postcards as iconic representations through simple postcard counting of images related to fishing. Secondly, an analysis is undertaken enumerating the frequency that seafood is observed on restaurant menus to gain an

insight into the extent to which seafood is utilised as both local and identity based ([Acott, 2011](#)).

Iconography is expressed through festivals as discussed earlier through important status based imagery such as signs, images and other connections with marine fishing. This can lead to accusations of ‘manufactured’ imagery and authenticity ([Brookfield, 2005](#)) and the creation of ‘communities of the mind’ ([Ross, 2015](#)). This has led to polarised opinions of the ‘authentic credibility’ of tourism and commoditised imagery :

“Mass tourism and commoditised heritage dominate the scene, if not the economy and thousands of new residents have been drawn there⁶⁹ by this imagery.”

([Kennedy & Kingcome, 1998, p.1](#))

Fig. 7-18 illustrates the iconic Mevagissey fish stall selling fish straight from the local fishing boats. This stall, in various forms, has been in Mevagissey since the creation of the Mevagissey Fishermen’s Co-Operative⁷⁰ and is a unique institution within the case study communities. The concept of the co-operative still resonates in the Mevagissey Social Club which is now a registered charity but still wholly owned by the community.

⁶⁹ Refers to Cornwall.

⁷⁰ The Co-Operative has now been closed down (see Chapter 5).



Figure 7-18 : Mevagissey fish stall - Source : ([Author](#))

Imagery reflects some aspects of the success of Mevagissey as a fishing community through its collaborative and co-operative approach. The village expresses this identity through multiple harbour images including the macro level visual aspects of the harbour as a whole e.g. infrastructure of harbour.

Fishing, as a cultural icon, is expressed in many forms e.g. art forms, signage, oral history, restaurant menus, postcards and photographs. This research adopted a visual method analysis using postcards displayed on racks outside retail shops in the three case study communities. Fig. 7-19 shows an example of a 'typical' postcard rack in Mevagissey, depicting a mixture of fishing boats (outlined in yellow), landscapes, a map of Cornwall and the iconic Cornish flag.



Figure 7-19 : Mevagissey Postcard Rack - Source : ([Author](#))

Postcard observations of the fishing imagery in these communities (Table 7-3) suggest that the marketed postcard depiction of fish and fishing is similar between Polperro and Mevagissey at around 50% of postcards.

Community	No. racks	No. postcards visible	No. images showing fish, or fishing connected	% showing fishing
Mousehole	6	82	26	32%
Polperro	21	318	154	48%
Mevagissey	27	309	152	49%
Totals	54	709	332	Average 43%

Table 7-3 : Postcard analysis - Source : ([Field data](#))

Mousehole postcard numbers suggest a lower expression of fishing at around 32%. However, this may be skewed by the smaller sample size in Mousehole. For all the case study communities, a figure ranging from about a third to a half depicting fishing related imagery, suggests a relatively high rate of expression for both

heritage and active fishing scenes when one considers landscapes, seascapes and land based cultural heritage that is available for portrayal.

Restaurant menus were analysed to assess the extent to which fish and shellfish imagery was presented to customers. Figure 7-20 shows one of many examples of the iconic use of fish in the case community restaurants.



Figure 7-20 : Mevagissey – Michelle's fish restaurant iconography - Source : ([Author](#))

Starters and main courses were analysed from advertised menus and counts made of the number of seafood dishes on offer (see Table 7-4). All the restaurants used the word 'local' when referring to fish sources although only some specifically mentioned the port of fish landing. Research suggests that tourists often wish to sample locally caught marine food as part of their visit, and that fishing creates a sense of place based on heritage ([Urquhart & Acott, 2013](#)).

Community	No. menus	No. starter or main items	No. mentions of seafood items	Seafood items as % of total
Mousehole	4	98	47	48%
Polperro	12	217	113	52%
Mevagissey	11	146	90	62%
Totals	27	461	250	Average 54%

Table 7-4 : Menu analysis - Source : ([Field data](#))

The data in Table 7-4 suggests that there Mevagissey uses fish terminology in restaurant menus more than Polperro by a factor of 10%. Polperro uses fish terminology in its menus by a margin of 4% above that of Mousehole. This corresponds broadly to the respective presences of fishing activity in each of these communities.

Fig. 7-21 illustrates residential responses to the statement asking resident whether the restaurants in the respective case communities reflect fishing community heritage. Polperro responses are inclined towards stronger agreement but with a significant number who disagree at around 30%.

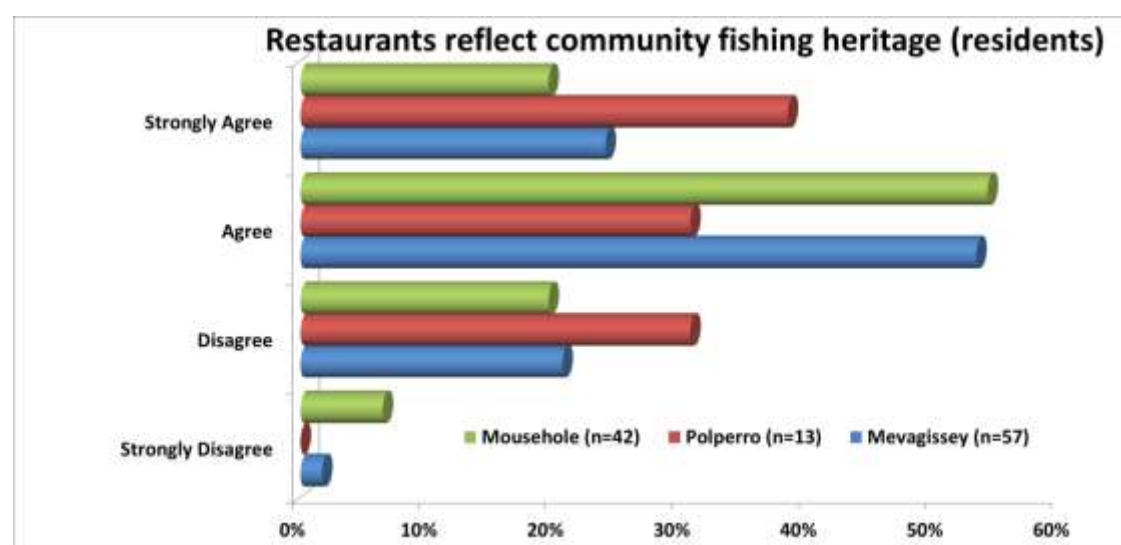


Figure 7-21 : Restaurants reflect fishing heritage – resident responses - Source : ([Field data](#))

Both Mevagissey and Mousehole are more weighted towards agreement but again there is some disagreement at around 20% each. In Mousehole around 8% strongly disagree with around 3% in Mevagissey. ANOVA analysis does not reveal any significant differences in cross-community response at the 95% CI level.

There is some obvious basic correlation between postcards and restaurant iconography of fishing across the case communities (see Tables 7-3 and 7-4), however this is not similarly reflected in the opinions of the residents (Fig. 7-21). This may be because residents see their communities in a more grounded (slow-onset memory) regard in comparison to the 'imagined' and faster-onset business 'created' imagery of a community identity aimed at a tourist audience.

7.4 Agency and power

7.4.1 Introduction

Communities are an academically contested concept (see also Section 2.5) and are always in a state of dynamic social change. To re-iterate, it is at the community level scale that pathways and trajectories of change are thought to be most visibly implemented on the ground in respect of resilience ([Wilson, 2014](#)). Building on Wilson's ([ibid](#)) concept of many different communities being embedded and overlapped into a 'single community', a notion of 'internally meshed-communities' might be inferred. Further, these entities are embedded within complex and dynamic networks of power, linked both endogenously and exogenously ([Putnam, 2000](#)). Communities are not simply encased, or constrained through their geographical physicality. They are dynamically connected at multiple

scales through multiple and complex social situations that can be viewed through the notions of nested multi-scalar systems as previously described.

As Wilson ([ibid](#)) proposed, notions of power configurations and self-interest at different scales and systems may drive community livelihood trajectories. These networks of power express highly divergent foci and aims and may promote complex mixes of resilience and/or vulnerable characteristics and processes. These power trajectories may be driven by incumbent residents and newcomers alike both subtly, and bluntly, projecting power into decision making processes and norm establishment at a very local and organic social level ([Sherif, 1936](#)). The configuration of power is an intrinsic element of overlapping path dependencies and this may further contribute to power 'lock-ins' via dominant power configurations and a normative community perception. There may be a reluctance to challenge these normative views within communities and political pressure may be exerted at many points to maintain the status quo of groups or individuals with vested self-interest ([Wilson, 2014](#)). The role of altruistic thought and activity is a factor in community resilience. Altruism, as social capital is an expression of community power supporting the building of social resilience ([Norris & Stevens, 2007](#)) and, arguably, all social actors have some level of agency in the development of community power configurations ([Giddens, 1979](#)).

Building on this theoretical notion of power, the aim of this section is to consider formal leadership and governance, informal agency, social policy and notions of power within the community as drivers of resilience and vulnerability within the case study fishing communities.

7.4.2 Power

Social capital, as discussed earlier, infers a notion of powerful agency in its own right. When asked how the community manages potential power conflicts with incomers, one Mousehole resident inferred that the extant community closes ranks on a tribal kinship basis :

“You can argue with one family and you have an argument with everybody, everybody is related to everybody else. Not so much like that anymore but if you make a mistake with one person you have half of the village against you.”

Mousehole resident ([MRI-002](#))

This may serve, on the one hand, as a ‘defensive power’ against incoming threats, underpinning cohesion, and on the other hand as a cultural trait, that may block aspects of change and the acceptance of ‘outsiders’. This is not an easy characteristic to interpret in community trajectory terms and causality, but newcomers may become immediately embroiled in community politics if they do not seek to understand the customs of local power configurations and cultural traits. Further, far from being parochial, this may be a useful social pathway, or practice of extant social cohesion/pride in the community and thus, from a community stance, a resilience characteristic. Another resident, asked about incomer integration, expressed views of the ‘mistakes’ of new residents and notions of cultural norms :

“People coming into the community are more powerful in the community than perhaps the community think. Somebody from Wales bought a redbrick house on the corner and wanted the village clock to stop chiming, the telephone box be removed to stop the phone ringing and parking to be stopped outside. Incredible intrusion into reality of the village, he was gone in a couple of months as well. They make that mistake and they don’t stay, he knew what he was buying, they do not stay long if they make that mistake, this is not how Mousehole works.”

Mousehole ex fisher and resident ([MRI-014](#))

These norms are clearly encoded in the phrase “... this is not how Mousehole works” ([ibid.](#)) suggesting cultural power configurations and the potential consequences of challenging them.

It is also important to underpin the real benefits that new residents can bring to a community. Issues of power configurations were evident in Mevagissey, as noted by this resident’s perceptions of his community :

“Inward looking and closed society. Old established families control all community organizations and do not welcome input from others, especially incomers.”

Long term Mevagissey resident ([VRQ-042](#))

This is an example of a socio-political lock-in and expresses a tension between older established families and this long-term resident in the social networks of Mevagissey. These social networks may be established over many years and undergo very slow processes of change. This is not to say all change is normatively ‘good’, but that some change is inevitable through community dynamics enmeshed in power configurations causing some to benefit, and some not.

Power in the community may have profound exogenous influence derived from other scales (or panarchies in its basic sense). Fishers in recent years have chosen to sell their fish and shellfish at other outlets away from the traditional auction house of Newlyn to auctions in Plymouth, Brixham and local sales outlets such as Mousehole Fish. Fish out of Polperro tends to go to exogenous business institutions such as Looe or Plymouth while fish from Mevagissey goes to Plymouth or direct to refrigerated transport to the European system. Having diversity for 'points of sale' at different scales has meant greater profits for fishers in some cases and puts more money for the same fish into their pockets. Comments (anonymous) from fishers alleged local power configuration of a local fish auction house and the alleged political ramifications of selling elsewhere. This can be viewed as a local power configuration whereby fishers felt penalised through alleged constraints to vessel access in a local harbour as a consequence. This alleged political issue was not an open discussion point and sensitivity was duly exercised. Nonetheless, it is of interest in the local community politics and dynamics of the fishing supply chain, and power. This is also a good theoretical example of an endogenous power configuration at the community system level creating localised vulnerability to some. It also expresses a long-term, slow-change power lock-in with access to other institutions and scales, controlled through localised power configurations.

Loss of community agency through economic factors featured strongly in the field data. The story is illustrated through the propensity of residents to 'sell up' through the lure of 'fast' money, starting in the 1960s :

“The village was always a sociable place mainly from the Lobster Pot which was a hotel and is now holiday flats. It was full of film and television stars in there. You could buy a house in Mousehole back in the 60s for ten thousand pounds. House prices went up and up and up and up and all these people came round the houses banging on the doors, at least their sellers did, and so many the younger fishermen said “How much !!”. So they took the money saying “I could buy another house in Mousehole for that”. Of course, they couldn’t, as the property prices escalated. So they ended up in places like Penzance. *They literally came in and bought the town.*”

Mousehole Resident ([MRI-012](#))

These series of events in Mousehole illustrate the start of the process of property ownership driven from economically powerful external entities (i.e. the exogenous wealthy) which drove a fast transformation of property ownership to ‘outsiders’. This is a primarily single directional power trajectory heralding the threshold at which Mousehole was to change forever followed by second home issues in other coastal communities. This was a fast-onset change in the 1960s and happened because of fishing activities moving to Newlyn and the cultural attraction of Mousehole to a culture and artistic group. In Mevagissey and Polperro, it is much more difficult to identify a clear timeframe at which the absorptive capacity was exceeded for locals to buy local property as the external power configuration was manifested in the community. Mevagissey and Polperro provide clear examples of slow-onset gradual processes where the implications for communities are manifested over long, decadal time-periods. External wealthy entities have slowly and inexorably exerted influence over the autonomy of local community systems financially ‘ejecting’ families and fragmenting heritage and social networks built up over centuries through housing acquisition.

7.4.3 Social ‘super-attenders’ and ‘active agents’

The concept of ‘super-attenders’ at the local level, mentioned earlier in this chapter ([Shaw, Scully & Hart, 2014](#)), provides a more suitable descriptor of informal but mobile and active community members who promote community agency, and embrace cognitive strategies. Research suggests that the concept of ‘super-attenders’ is linked to the theory of ‘supra-individual’ qualities and attributes that arise from some individuals in group situations developing strong influence, and creating a drive and may establish resilient norms from these interactions ([Sherif, 1936](#)). A similar description of an ‘active agent’ has been applied with individuals taking ‘leadership’ based on their belief in the ‘ability to make change’ ([Magis, 2010](#)). Research also suggests leadership is not a prevalent dimension of community resilience and the term ‘active agent’ refers to both informal ‘leadership’ as well as key individuals who do not assume ‘leadership’ *per se* but who do drive change for community benefit through collective action ([Amundsen, 2012](#); [Ross, 2010](#)). Leadership has been suggested as a core ‘dimension’ of community resilience ([Buikstra, 2010](#)). The use of leadership as a description is not granular enough to express the diversity of ‘active agents’ or ‘super-attenders’ and the less visible ‘low profile’ but influential community contributors. Scully & Hart ([ibid](#)) also portray a contrasting role, that of the ‘hardened preparers’ who carefully prepare themselves for negative eventualities but may overestimate their capabilities with less well developed adaptive capacity and flexibility. This may (paradoxically) create an increased risk environment. Social capital and adaptive capacity remain a ‘slippery’ empirical concept ([Pelling, 2011, p.13](#)). This section will analyse how agency and leadership are reflected within the case study communities with specific reference to

their 'super-attenders' as a positive promoter of agency and its framing within notions of leadership.

The role of 'super-attender' is certainly not a new concept in coastal community terms. What is different in the 21st Century is the importance of such individuals at a time when coastal communities are becoming increasingly exposed to other systems and increasingly subject to exogenous political and financial control. These adaptive cycles of power do not just encompass government bodies, but a complex amalgam of influential and remote systems (or panarchies) that demand interaction in ever varying and complex degrees. Super-attenders can, and do, provide some of the drive, engagement skills and co-ordination to work with other institutions. One such 'super-attender', interviewed in Mousehole, mobilised the community in the pursuit of converting a storage building in Mousehole into a heritage centre and storage area for festival gear. This example of fast-onset resilience building demonstrates the negotiation and collaboration skills needed to drive this adaptive and transformative resilience building initiative. Multiple scales and institutions were addressed from community e.g. The National Lottery, Cornwall County Council, Penzance Parish Council as well as meshing with the community interests of the Mousehole Lights Festival and local expectations (see Box 7-2).

These 'super-attenders' are critical in mobilizing and progressing initiatives and to spread the issue to other scales and groups, critically those of decision makers and other forms of governance. ([Coles & Buckle, 2004](#); [Putnam, 1993](#)).

The Solomon Browne Memorial Hall

Communities can benefit from the knowledge and insight of incomers when working with external organisations such as the National Lottery Fund. Mousehole currently has no community hall. It has historically used the community hall in the neighbouring village of Paul and the British Legion club for functions. The community decided they really needed a hall to provide a community gathering place with its own identity, and to serve a multiple purpose as a heritage centre, complete with illuminated pilchard pits, and a storeroom to house the famous Christmas lights. A storage building (the Solomon Browne Hall pictured) is being adopted to serve this purpose.



A resident college lecturer ([MRI-006](#)), moving into Mousehole from a nearby area, volunteering to champion the application process to the National Lottery Fund and subsequently raising £500,000 ([Cornishman, 2016](#)). The lecturer is also President of Mousehole Rowing Club and a lecturer in tourism and was interviewed. She expressed the confidence and drive that the community was exacting in its application for funding with the National Lottery Fund and the wide collaboration scope and trust she enjoyed with the various initiatives she was involved in. This will boost the resilience of the community by having a dedicated social centre to support heritage, community, tourism and festival activities. It should be noted that such community action involves many people, as well as the example of this 'super-attender'.

'Super-attenders' are important in social resilience because they are social actors who instigate change and collaboration in communities, lobbying authorities and actively seeking alternative funding. This can drive change quickly and effectively as individual agents of the community. This is a resilience building process as an alternative to some community perceptions that central government, and even local parish councils, do not effectively represent community interests, such as planning and services.

Other 'super-attenders' evident in Mousehole include the husband and wife organisers of the bi-annual Sea, Salt and Sails Festival which is an authentic true maritime heritage festival, unique among the case study communities. Keeping momentum for such festivals takes huge initiative and effort, each one brings new challenges and is a continuum of the heritage tradition of festivals discussed earlier, requiring immense efforts which are altruistic and charitable in the cause of heritage and conservation of rare boatbuilding skills and intergenerational knowledge. This festival draws on regional and international participants, and has been a long-term project starting from humble roots and interacts with a general community, or panarchy, of traditional boat owners locally, regionally and nationally. This denotes a local organic sense of identity that has close cultural and traditional correspondence with wider panarchies.

Festivals also offer opportunities for community individuals to act as independent agents within a collective panarchy. These events are driven by multiple factors. The Christmas Harbour Lights Festival is a community effort, driven by a committee of representatives from the Harbour Authority, residents, fishers and businesses. The activities of 'super-attenders' are mixed with other collective actions in the community such as the Harbour Lights Festival, both resilience factors, but

creating a synergy in adaptive capacity and an active vehicle for community adaptation promoting social cohesion through active participation.

Collaboration, as an agency promoting factor, is evident in the fishing operations in Mevagissey, one fisher acted as a 'super-attender' in bringing a different view of traditional local fish auctions by selling direct to an external panarchy, the Brixham Co-Operative ([VRI-005](#)). His approach was rapidly adopted by other fishers who then decided to form a co-operative through the formation of the Mevagissey fishing Co-Operative founded in December 1965. Mevagissey Fishermen Limited sold all of its catch to the panarchy of Brixham and Torbay Fish Ltd., also known as the Brixham Co-Operative ([SeaFish, 2015b](#)), later shifting all its sales to the Plymouth fish auction. Mevagissey was forced to close its Co-Operative in the mid 1990s due to (allegedly) issues of payment from Plymouth fish market causing its collapse, clarified in the following interview extract :

"In years past there was the formation of a Co-Op, the Co-Op kept going until about the 1990s when the Co-op failed then ocean fish started up and a lot of the infrastructure was developed through grants. We installed a chill store cold store and ice making facilities. We worked very effectively with the fishermen to supply what they needed to do their job. The failure of the Co-Op was put down firmly against payment issues from Plymouth fish market that caused the collapse of the Co-Op. Whatever we can do to help fishermen e.g. we are putting a new slipway for the small boats requirements and we are hoping for an extra set of lofts. We have an application in to build an extra set of lofts behind the crane so hopefully that will come to fruition soon. This will definitely help to promote an integrated fishing environment in Mevagissey. Our icing and fish cleaning systems are here for the fishermen."

Mevagissey Harbour Authority ([VGI-007](#))

This example illustrates an adaptive response, as a group, by the Mevagissey fishing community to interrupt the control exerted by different external panarchies to

better serve the interests of the local fishing panarchy by retaining sales income at the local level, and cutting out ‘middle-men’.

7.4.4 Formal leadership and governance

The intersection of modernity and traditional notions of leadership, especially in consideration of the dynamics between homogeneous and heterogeneous social networks are important in concepts of leadership ([Delanty, 2003](#)). Leadership is important in community resilience as discussed in Chapters 2 and 5 and is manifested in many different forms throughout the case communities. Leadership is framed in modernity, tradition, cultural characteristics, social networks and the concept of the ‘super-attender’ discussed in the previous section. Leadership may be locked-in to traditional community power configurations such as local families developed through slow-onset processes.

The meaning of ‘leadership’ is a term strongly contested by fishers, for example in the following interview extract with a Mousehole ex-fisher and harbour authority ([MGI-001](#)) :

Researcher : “How does leadership play a part in fishing ?”

Interviewee (MGI-001) : “I don’t know what you mean by leadership, you are just a skipper and a boat owner, this is not leadership, is this a relevant term to use here? You are just the boss, is this leadership, you just earn your living.”

Researcher : “Can you define some of the qualities of a good skipper ?”

Interviewee (MGI-001) : “He was the man that counts. One of the best skippers was a bus driver, he started in trawlers went on to get his mates ticket. Nothing fazed him, he always got some fish. It is about confidence and natural aptitude and tenacity. You can only have one skipper on one boat that is a fact.”

This quote conveys the independent nature of fishers and the nuances of using the term 'leadership'. This has connotations which may reflect hierarchical aspects of modernity linked to impositions more familiar in urban and commercial networks.

In Mevagissey, the Harbour Master role is a key operational and leadership role. The Harbour Master (HM)⁷¹ at the time of this research initiated and led many of the harbour funding initiatives, driving and adapting the fishing interests of the harbour but with the whole community in mind. The important role of the HM was mentioned frequently in interviews, questionnaires and conversations. The following quotes support the respectful position of many residents of the work of the Harbour Master :

“Meva has a good group of people and we have had a great HM for nearly 25 years and now retiring. He is very understated and gets mucked in, he is a brilliant Harbour Master and well respected across the community, he will be very difficult to replace.”

Mevagissey fisher and resident ([VFI-001](#))

“The HM is very well respected. There will be a baptism of fire for new HM at Meva, 21 years in the job. We'll stress him out and get his number pretty quick.”

Mevagissey fisher and resident ([VFI-003](#))

It was apparent, both from talking to both fishers and the community, that the Harbour Master had gained widespread respect from both the general community and the fishing community from his actions to promote fishing and the port of

⁷¹ A new HM is now installed in Mevagissey since the interviewed HM retired.

Mevagissey. In resilience terms, the harbour has undertaken infrastructure and service improvements for its fishers, which make it a more resilient and attractive port to both fish from, and to land fish into.

The Mousehole harbour office manages the harbour and bye-laws on behalf of the Harbour Board ([MHA, 2015](#)). However, it also performs a collaborative power role in the community. The role of Mousehole Harbour Master runs along traditional lines through its current incumbent⁷² and a 'wide sweeping' deputy. The Harbour Master's family is synonymous with a long lineage of Mousehole residents and the Penlee disaster. The harbour itself is managed by the Harbour Master, along with his deputy in a very hands-on and collaborative way. They are both local instrumental and trusted social elements in Mousehole and notably, not autonomous distant authorities and have a face and social presence in the community. It is this localism that is a critical factor in fishing communities. However, the role of the Harbour Office has been both praised and criticised. The criticism is not of the incumbent Harbour Master, but of the 'undemocratic elective processes' of the Harbour Commission. When asked about the role and efficacy of the harbour authority, one resident was vehement in opinion :

"Talking about the harbour commissioners in Mousehole, as far as I'm concerned, it is an illegal group. They have never had an election and a lifetime of not consulting the community".

Long established Mousehole resident ([MRI-004](#))

⁷² Sadly, the incumbent Harbour Master has deceased since the fieldwork in 2013.

This traditional element of power may resonate with traditional methods of harbour governance in rural communities, which rely heavily on the social capital of a community to support the role and not the underlying governance. The role depends on community co-operation to operate with trust and efficacy.

Infrastructure transition and the development of Mevagissey harbour can be perceived as a strong pathway of resilience in the fishing community. Care has been taken not to 'industrialise' the harbour to the detriment of tourists ([VGI-007](#)). It is also a good example of EU FLAG funding benefitting a fishing community with the development of new fishing infrastructure and services such as fishing gear buildings and a new slipway representing a multi-million pound investment. The harbour has also published a regeneration plan ([MHC, 2014](#)) which specifically targets the next generation of fishers as its hope for the harbours future and with a view towards specifically benefitting the whole community. The HM sums up the strategy succinctly :

"We are very aware of the lack of good full time employment within the village, and if skilled jobs can be created within the Harbour area or village community through the Harbour Development, then we might succeed in maintaining the age balance within the community. Mevagissey needs jobs for young people to survive as a thriving community well into the 21st Century."

Mevagissey harbour master ([VGI-007](#))

Concerns framed in the centralised governance power of the CCC were evident in many interviews and questionnaires, especially those of planning. This Mevagissey resident expresses her feelings about the loss of control of the Parish Council and the feeling of isolation from the Cornwall County Council at County Hall in Truro :

“Unfortunately Mevagissey Parish Council have no power, they can only recommend. Since the district councils were abolished I feel that the Cornwall County Council are not considering our views, particularly on planning.”

Mevagissey resident ([VRQ-7152](#))

This was a frequent criticism of the ‘remote’ nature of the Unified Cornwall County Council with power and control of many aspects of community life now focussed at a different and exogenously remote scale. This forms a contrast between grounded local knowledge based initiatives and exogenous centralised power configurations.

7.4.5 Social policy

Social policy instituted at several scales of governance influences social resilience at the community level to the benefit of some and the detriment of others. Thus, impact at the local level can may unintentional through other multi-scalar systems and cross-scale impact (or within the same scale). Some communities fare better than others in their ability to respond to exogenous impact, this section observes social policy at the community level through a resilience lens.

To recap, the concept of nested adaptive cycles describes multiple cycles that occupy discrete scales of both time and place, connected to adjacent cycles forming a linked system. Critically, these cycles do not exist in isolation and can be dynamic or more rigid in both time and space ([Garmestani, Allen & Cabezas, 2008](#)). The case study communities, as systems, are cross-scale linked in policy terms through other significant institutional systems, such as the UK Government, the Unified Cornwall County Council and local Parish Councils in different degrees of hierarchy and

independence. UK Governments, as political systems, exist in time cycles of multiples of approximately five years, thus ideological fluxes may persist or decline over variable periods. Many other systems and adaptive cycles such as the world economy, have many points of contact directly or indirectly at the community level through policy from central, regional and local government panarchies. These may or may not be hierarchical. Some social challenges are better resolved at certain levels and best deliberated or negotiated at an appropriate level where ramifications and unintended consequences are better understood. This would allow cross-level decision processes within a multi-level system while multi-party collaborations could work between levels along with co-management ([Pelling & Manuel-Navarrete, 2011](#)).

The recent Cameron initiative of the 'Big Society' has drawn accusations of being perverse in its abdication of social justice, particularly in the context of its inadequate state regulation of banks on his 'watch' ([Kisby, 2010](#); [McCabe, 2010](#)). The premise of this initiative was to 'empower' communities through promoting volunteering, ideologically 'labelling' individuals as philanthropists and volunteers ([Kisby, 2010](#)) and the 'responsibilisation' of individuals ([Bottrell, 2013](#)). Major critiques include that of the perception of individuals by government as not being 'politically literate' ([Bottrell, ibid](#)). This has led to a decline in individual agency and engagement degrading public contribution and views on how public and private service delivery. In essence, individuals and their communities became 'detached' from scales and arenas of consultation from whence their agency became depleted ([Kisby, ibid](#)). This is particularly true of geographical regions such as Cornwall who are distant from centres of power. 'Big Society' was severely criticised as being viewed in purely 'business terms' (and not in a social context) as a 'zero-cost free-labour' option for the Government further building the case for abdication of

responsibility in its social policy ([Kisby, ibid](#)). This has implications of attempts to 'harness' a volunteer 'workforce' *as if it were a fixed resource*, basing policy on the false pretext that resilience is a permanently extant 'resource' or workforce' in communities using volunteer groups who would then be obliged to 'hold the baton' as stakeholders. There has been little or no investment in these community initiatives by government. Although Cameron has gone, and so has 'Big Society' as an initiative, the legacy remains from his actions which is was, and is, solidly linked to austerity measures ([Hancock, Mooney & Neal, 2012](#)). The combination of this initiative along with policy-based sustained austerity funding cuts took place over long timescales and has had differential impact on the case study communities.

Local agency and achievement through super-attenders and others as discussed in this chapter, is linked to a 'doing' attitude is a critical resilience aspect of these case communities in community voluntary systems (or basic panarchies). However, this is also a double-edged sword in an age of austerity. Voluntary work has traditionally been viewed as being 'below the radar' ([McCabe, 2010](#)), and is now being viewed as 'above the radar' as a 'resource' that communities may or may not have, but a 'free' resource in current governmental social policy terms accompanied by little or no financial support. Community adaptive capacity and philanthropy are not evenly distributed across communities ([Schmuecker, 2011](#)) and economically deprived neighbourhoods have generally fewer resources to draw upon, whether financial or skills related, to sustain and build community capacity ([Cox & Schmuecker, 2010](#)). The poor and the privileged are inherently positioned differently in their ability to cope with funding changes and austerity driven through exogenous driven policy from exogenous panarchies such as regional and national government.

Thus, it may be argued that state rhetoric and enthusiasm for resilient individuals (e.g. super attenders) and communities is a vehicle to promote neo-liberal ideals, with a shifting or abdication of responsibility from the state governance systems directly (and unfunded) to the community system with a divestment of stakeholder elements with financial obligations expunged from the state system ([Bottrell, 2013](#); [Hancock, Mooney & Neal, 2012](#)). This 'smokescreen' can hide factors such as market based accumulation facilitated by multiple community asset dispossession (e.g. second homes) and weak poverty alleviation policy within marginalised communities e.g. Polperro. This loss of resilience is further exacerbated by policy cuts to public services and a slow shift of rights and wellbeing to more privileged members of communities to the detriment of the less privileged.

The reduction or removal of cultural, political and social agency and rights further disadvantages the most vulnerable by denying them services and intensifying their needs for resilience ([Bottrell, 2013](#); [Fine et al., 2010](#)). Additionally, the reduction of decreasing state benefits and access to health for the poor, increases the likelihood for interventionist targeting and 'non-conformance' imposition of penalties for the less wealthy, rather than providing a 'platform' to develop resilience. A further risk for the community is the exposure to a loss of community volunteers who may now perceive governmental abuse of their 'good-will' volunteering efforts. Volunteers are not 'employees' and the 'business model' adopted in the Big Society initiative was deeply flawed and unsustainable ([Hancock, Mooney & Neal, 2012](#); [Kisby, 2010](#)).

From a 'super-attender' viewpoint linked to policy, the success of the Solomon Browne Memorial Hall in Mousehole, which drew on the resources of more than one 'super-attender', portrays elements of both resilience and vulnerability. The resilience

element is that the community now has a community hall which is a great contribution to social networks as a 'resilience-generating institution' ([Bottrell, 2013](#); [Fine et al., 2010](#)). The vulnerability is that governance institutions may now view a community as being resilience through such actions and not requiring aspects of public funding *because* of its expression of resilience, which in itself may not be sustainable over the long term. A local community has thus achieved a significant end-result that ironically, may weaken its own tenure for future further funding through its own resilience endeavour and behaviour. A critical question arises of policy trade-offs in community initiatives and their impact in the longer terms (e.g. annual to decadal) and engagement in policy decisions and subsequent trade-offs. Mousehole has weak local governance as part of the broader and remote Penzance Parish Council. The continued existence of Mousehole's strong adaptive capacity is based on a combination of a strong community volunteer culture, community cohesion, management and fund-raising skills, social networks and local wealth to achieve initiatives e.g. Lottery Funding for the Memorial Hall. The expression of resilience may leave Mousehole unaware of any threat or vulnerability exposure through complacency or self-delusion that is a recurring theme in resilience theory and practice ([Brown, 2014](#); [Sapountzaki, 2014](#)). Mousehole as a community, along with and its volunteer initiatives are lesser affected by changes in exogenous policy funding and cuts because it is less dependent on them. Mousehole has so far weathered the slow onset of austerity-orientated policy through its wealth and strong social cohesion. This is the case at this moment but there is no guarantee of sustainability over the long term and assumptions in resilience can themselves constitute vulnerability.

Polperro, in contrast to Mousehole and Mevagissey has a very weak expression of voluntary initiatives (a major influence is likely to be the reducing core year-round community). This is coupled to a weak and degrading social network. Polperro expresses a hierarchical and rigid doctrine to local governance and views community as a proxy for a business, this is more closely aligned to the Conservative 'Big Society' view the other two communities. Moreover, the Polperro business based community promotes rigidity over flexibility thus reinforcing and reflecting the hierarchical notions of other panarchies or systems, and especially those of central government limiting adaptation at the local scale and undermining long-term flexibility. This scenario synergises well with adaptive cycle theories of community and power ([e.g. Pelling & Manuel-Navarrete, 2011](#)) who argue that such rigidity limits the scope of adaptation and mitigation at the community level, leading to vulnerability.

Polperro provides a warning shot of the importance of social life and rigidity to a community. Field research strongly suggests that it is governance rigidity and a predominantly business orientated community that has created vulnerability in Polperro through this monoculture of business 'lock-in'.

Importantly, Polperro also has a high degree of poverty and social housing. It may be inferred that state benefits are more important to more of the residents of Polperro than the other two communities and that austerity-related policy measures are going to bite hard and quickly into these vulnerable members of the community. This has been implemented through a long-term austerity policy regime with additional rapid specific benefit measures leading to crushing fast-onset implications for poorer members of the community. These measures include housing benefit caps, disability and social benefit reduction, withdrawal and penalties. These factors,

combined with weak and degrading social networks and strongly seasonally constrained business has driven Polperro into a very vulnerable position. Polperro has suffered inordinately due to Government austerity policies. This is a key concern in this research.

In Mevagissey, the fishing community has benefitted from long term EU policy by creating a multi-million pound slipway and other smaller but financially significant initiatives for fisher and leisure use which has underpinned its fishing activities. In addition, the community has built a multifunctional leisure centre with National Lottery and EU policy funds. Mevagissey has suffered less than Polperro in austerity policy terms and has strong social and fishing networks supporting strong social cohesion. Mevagissey is likely to suffer most of the three communities by Brexit if the eventual negotiations discount regional funding for fishing communities and social policy initiatives, which seems likely⁷³. The contribution of the voluntary sector to the Mevagissey community is less pronounced than in Mousehole. Mevagissey is very much a working town driven by tourism, fishing and a strong festival discussed later in this section. As such, the community has some adaptive capacity driven from responsive, representative and pro-active parish governance with very strong ties to the CCC as identified in interviews ([VGI-002](#)). Collaboration between council and community has benefitted the community (e.g. affordable homes) and allowed the community to cope with a lack of voluntary sector and community based initiatives from central government scales.

While less wealthy in general terms than Mousehole, Mevagissey is a true working fishing community in the harbour areas and suffers less from exogenous system property ownership than Polperro. Social policy measures have benefitted

⁷³ The UK at the time of publication of this thesis had voted to exit the EU through 'Brexit'. However, Article 50 had not yet been signed, signifying the start of the exit process.

Mevagissey in many ways. Austerity measures, while apparent in Polperro and yet to manifest themselves significantly in Mousehole are important in Mevagissey as well. While Mevagissey does have the benefit of tourist and fishing economy, research suggests that the community does have a strong dependence on social benefits in the winter months similar to, but not as dependent on these as is Polperro. Mevagissey is probably on the edge of a similar reaction and vulnerability to austerity policy measures as Polperro has undergone in the past several years regarding the poorer members of society.

7.5 Conclusions

The aim of this chapter was to illustrate, contrast, and evaluate socially focussed resilience and vulnerability factors influencing social resilience in the case study communities. This section summarises key findings of how this chapter has assessed the question of status based resilience analysis, capital utility and implications of a 'hybrid' longitudinal-status based techniques involving slow-onset resilience and vulnerability change. The key findings of this chapter are outlined below.

7.5.1 Key Findings

- a) Social networks and permanent inhabitants are critically important for the social fabric of the case communities supported through clubs, societies and the community infrastructure (such as community noticeboards and social hubs).

- b) Social memory plays a key role in the identity of these communities linked strongly to a historical tendency for pluriactive occupations such as fishing and quarrying. Festivals and social activities play a major role in identity formation and retention.
- c) Social policy driven by government institutions may view community resilience-building volunteering initiatives as a static and permanent unfunded 'resource' adopting a 'business lens'. In an age of austerity, resilient activity at the community level can generate funding vulnerabilities through central government leading to a consequent unfunded abdication of responsibility to the community.

7.5.2 Social resilience threads

Section 6.8.2 evaluated the three key research threads from an economic perspective. This section further evaluates and builds on this in a social context.

1) Is the typological approach and evolution a good means of unpacking and giving substance to resilience as a concept ?

As discussed at the start of this chapter, the typological approach, building on Chapter 6, is composed of an overarching social capital lens supporting three resilience topics a) socially connected communities b) event memory and c) agency and power. These resilience topics further frame resilience and vulnerability utilising resilience themes and factors. These resilience topics and themes are analysed in resilience terms through status-based assessments supported by a proxy longitudinal process narrative (as in Chapter 6).

Building on Section 6.8.2, the use of the typology in this chapter is useful through the salient and grounded social issues driven out by the fieldwork. The typology as

discussed in Section 6.8.2 also allows cross-scale analyses. The typology is closely aligned to conceptualisations of social resilience such as social networks and trust, discussed in the next section. The typology is also closer to views of social capital and notions of resilience theory 'language' than the typology and use of economic capital in Chapter 6.

Typological weaknesses discussed in Chapter 6 included the lack of a general focus on resilience, which is also a weakness of capital utility using the 'silos' of predefined capitals linked to the following section.

2) Do the capitals work as a means of exploring resilience (in relation to understanding status, process and transformation ? What are their strengths and weaknesses in these regards ?

As discussed in concept in Chapter 6 and building from this, much criticism has been raised in regard to using and comparing the various forms of capital, and this is especially valid when relating economic and social capital ([Haynes, 2009](#)). Status, process and transformation in resilience research are inherently complex and contested in social systems. Pelling ([2011](#)) suggests that we know far less about the notion of transformation than we do of what a resilient system might look like, however resilience remains a core component of transformation but has scale specific characteristics. Such an example is the degradation of social networks as housing stock is 'consumed' by external entities such as second and holiday home ownership e.g. Polperro. The community is certainly transforming into a different entity, but the effect to the local system is far more than individual localised effects in the external systems through loss of adaptive social capacity and changes in economic systems. Hence, if Polperro moves to gated community 'status', the

community must step through a number of intermediate socio-economic 'states' into a transformation, any which may not complete and are not describable as future events at the present.

The utility of inter-capital analyses appear to be less useful than state-based views and can be augmented by process and system views, or vice versa. Nevertheless, transformational views are still a slippery concept in resilience research ([Pelling & Manuel-Navarrete, 2011](#)).

One important critique of social capital is that it is not a 'capital' at all and is a misleading metaphor in relation to economic capital. Further that the use of economic principles in social capital is a contagion to the richness and social 'value' laden aspects of sociological theory and practice ([Pelling & High, 2005](#)). Another important criticism is related circularity and the problem of the 'direction' of causality in social systems research.

Changes in social capital and changes in communities, even if they are related, are problematic in the determination of which direction causality originated and social capital is difficult enough to define, but it is 'impossible' to measure. Haynes ([ibid](#)) also suggests that the use of social 'capital' can be a hindrance to economic success, with different types of 'vulnerability generating' externalities building barriers to meritocratic and efficient decision making through power configurations of self-interest. This is very norm laden position and not one that fits in well with resilience concepts that encourages full disclosure of resilience and vulnerability factors. An example of this is the shaping of adaptive action through power configurations. Systems at the community level tend to be specific rather than general in their composition. The power-driven 'dark sides' of self-interest in social capital research are important as power is so critical and fundamental in social

systems. Pelling ([2011](#)) makes a very important point in that power is a *relational* concept in social capital and that power is not monolithic. This accentuates a need to move away from capital views to promote flexibility in analysing social system dynamics. This can include nested adaptive systems and the 'three-state' model of status, process and transformation. Thus, the use of capitals, as discussed in Section 6.8.2 can form a hard architectural 'silo' that may not be normatively appropriate in community level resilience research.

3) Is resilience a useful concept for examining the under-investigated phenomenon of slow-onset forces ? What are the strengths and weaknesses ?

Building on Section 6.8.2, the study of slow-onset forces in resilience is laden with questions of causality in social research, as is the case with fast-onset forces but with potentially greater complexity. The issues of causality may be confounded in system or panarchy terms by the notions of multiple systems running at different speeds with complex interactions that may themselves be fast changing. These complex interactions increase in complexity over longer time-periods and inferences of causality are prone to major interpretation challenges.

Hence, as discussed in Chapter 2 state views can be presented through three components in resilience terms, 1) absorptive 2) adaptive and 3) transformative, a 'three state' model. This is a combination of measured state capacities as a process in resilience terms. This chapter has continued to use a state-based approach supported by a proxy longitudinal narrative but constrained by capital based issues. The approach in this chapter has been to use the 'three state' model where appropriate or even possible. In many cases direct interpretation of

community resilience issues into states based on the 'three state' model has not been possible due to confounding issues of identifying clear. Rather, a relative state and proxy view of inter-community resilience has been adopted which has value in identifying longitudinal issues influencing community resilience and vulnerability in states across different timescales.

This chapter has thus adopted a movement away from a capital-based assessment towards a social resilience based assessment moving towards the CRVI typology as discussed in Chapters 2, 3 and Section 6.8.2. This research extends the notion of status capital views in resilience assessment, firstly by the use of resilience based factors embedded into capitals and then by moving towards a resilience-centric assessment with the CRVI. The status based CRVI previously discussed in principle (also see Chapter 8) addresses some of the typological issues used in this chapter and Chapter 6 by framing the research findings fully within a social resilience typology rather than a capital orientated one. Research benefits can be derived from an initial capital based typological assessment and then moving towards a more resilience-framed typology. As discussed in Chapter 2, resilience can be viewed as a 'means' and not an 'end' in broad terms (in a sustainability context) and this is the intention of adopting the CRVI. This CRVI forms a novel view of resilience and vulnerability status in line with notions of resilience through a set of 'intermediate outcome' indicators based on the factors and themes assessed in this chapter and Chapter 6.

7.5.3 Panarchy

The use of panarchy has important and fundamental resilience research limitations as critiqued in this chapter (and building on Section 6.8.3) in its adoption

as a resilience assessment vehicle. The problematic issues of status and process along with the dynamic and subjective interpretative aspects of social resilience led to the decision in this research to adopt the use 'dynamic indicators' as a core analytical tool rather than panarchy as a core analytical method. Resilience building can be thought of as a natural ally to political processes to empower communities ([Pelling & Manuel-Navarrete, 2011](#)) and panarchy frames useful linkages and dynamics views across socio-ecological levels and systems. This may involve trade-offs among levels. However, as discussed in policy terms, appropriate policy process is a matter of fit at the right scale ([Berkes & Ross, 2016](#)) and the adoption of panarchy is useful as a descriptive vehicle but seemingly too constraining to operationalise resilience within the grander scope of panarchy. Interactions and variation in policy are complex and perhaps a better alternative notions to panarchy in social systems might be to adopt panarchy as a theoretical interest and adopt a more contextual view flexible view of nested systems as critical rather than a 'pan-theory' to encompass all.

7.5.4 Key Finding Summaries

- a) Social networks and permanent inhabitants are critically important for the social fabric of the case communities supported through clubs, societies and the community infrastructure (such as community noticeboards and social hubs).

This chapter has identified several aspects of social networks in the case study communities and resilience implications. Polperro has suffered significant degradation of its social system in general, through a declining core population and a

rigid governance system and is thus in a rigidity 'trap' whereby there is too much stability in an institutionalised regime ([Pelling & Manuel-Navarrete, 2011](#)) and an uncritical consensus with a lack of expression of options. This has become a serious issue in Polperro and may constitute 'jumping a step' in the absorption, adaptation and transformation process, moving straight to transformation and consequent outcomes in sustainability terms. This is likely to lead to further social degradation e.g. gated communities. Social networks and hubs are indicators of social activity and the community 'heartbeat' that is pulsing strongly in Mousehole and Polperro but noticeably at risk in Polperro. Hence, the social infrastructure of communities and the mix of formal and informal roles along with active participation in governance is crucial to social resilience at the community level by building or maintaining a forum for imagination, self-organisation and building of social agency. Formal governance may not provide this opportunity and becomes the default power configuration if social agency degrades, is subdued, or is absent. Social capital (and power) exists in networked relationships ([Pelling, ibid](#)) and this is integral to social resilience. If the social network degrades, agency and power may become concentrated at the formal governance level and through self-interested business drivers dominating and controlling the community.

- b) Social memory plays a key role in the identity of these communities linked strongly to a historic tendency for pluriactive occupations such as fishing and quarrying. Festivals and social activities play a major role in identity creation and retention.

Social memory can be reinforced through community celebrations such as festivals and new notions of identity can be created through such events e.g. Polperro as well as more authentic notions of heritage. The expressed heritage identity perceptions of a community may differ between those of residents and those of businesses (who may create new identities and re-imaginings of community). Thus, created imagery and authentic heritage may contrast and reflect the extent to which businesses may stylise its 'heritage offering' in business terms to attract tourists. This is not an attractive proposition towards the retention of authentic heritage in these coastal communities and weakens tenure on communities earned authenticity.

- c) Social policy driven by government institutions may view community resilience-building volunteering initiatives as a static and permanent unfunded 'resource' adopting a 'business lens'. In an age of austerity, resilient activity at the community level can generate funding vulnerabilities through central government leading to a consequent unfunded abdication of responsibility to the community.

The unintended (or intended) consequences of 'blanket' social policy setting can cause long term harm to communities who have resilient traits that have developed over generations. Such an example has been highlighted in this chapter, the Mousehole community success of the Solomon Browne Hall. However, in business terms this may have set expectations of a normative view of an unpaid voluntary workforce. This has serious connotations of an effective and assumptive punishment culture for communities building resilience. This does not mean communities such as Polperro cannot benefit from voluntary activities, regardless of the political climate.

Social resilience studies can make a real difference in ascertaining the current resilience culture through e.g. volunteer culture and potentially making communities aware of other views of their social environment before applying blanket policies. Communities that undertake resilience building through voluntary initiatives may suffer loss of their critical volunteer culture if central government perceives them as resilient and thus treating volunteering as normative and unpaid work. This serves nobodies interest at the community level, abdicates government responsibility and degrades community trust and reciprocity, critical components of social resilience.

8 Implications for resilience in the case study communities

8.1 Introduction

The two key objectives of this chapter are to :

- a) Examine the typological approach (the CRVI introduced in Chapters 2 and 3) as a way of making more tangible the notion of community resilience, and further to identify the strengths and pitfalls of the CRVI. This reframes, and is distinctive from, the typological approaches adopted in Chapters 6 and 7.
- b) To evaluate the appropriateness of capital utility, and the process of threshold development within the CRVI resilience typology.

This chapter is composed of eight sections. Section 8.1 provides an introduction outlining the chapter objectives and structure.

In Section 8.2, the CRVI as a typology, is further built upon from the discussions of Sections 2.5 and 3.4.9. This is followed by an overview of capital issues and the process of threshold development.

In Sections 8.3, 8.4 and 8.5, the CRVI is further assessed at the resilience/vulnerability theme level to summarise analysis undertaken in Chapters 5, 6 and 7. The key aim is to build a foundation to assess the CRVI utility through the adoption of social learning and livelihoods along with housing and services.

In Section 8.6, implications for community resilience through the key research objectives are assessed through the CRVI. This is undertaken through 1) a deeper

critique of the strengths and weaknesses of the CVRI as a typology 2), an evaluation of the appropriateness of capital utility and 3) a deeper critique of the CRVI threshold process development and tipping points.

In Section 8.7, possible case community resilience trajectories are discussed stemming from the CRVI analysis and discussions.

In Section 8.8, the chapter is concluded through re-addressing the chapter objectives.

8.2 The CRVI

To recap, building on critical resilience literature and methodologies ([Adger, 2006](#); [Béné *et al.*, 2016](#); [Berkes & Ross, 2013](#); [Berkes & Ross, 2016](#); [Brown, 2014](#); [Davidson *et al.*, 2016](#); [Handmer & Dovers, 1996](#); [Pelling & High, 2005](#); [Pelling & Manuel-Navarrete, 2011](#); [Wilson, 2012a](#)), the CRVI is an actor-orientated social resilience typology encompassing three resilience themes. These themes emerged through field data analysis, discussions, and the debates undertaken in Chapters 5, 6 and 7 through capitals and further informed through the theories and methods introduced in Chapters 2 and 3. In Sections 2.6 and 3.4.9, the CRVI was assessed as a primarily qualitative, community-centric resilience framework expressing a trichotomy-based status indicator derived from a hybrid assessment of multi-scalar, multi-factorial, endogenous and exogenous systems. In this sense, the CRVI provides a practical and partially visual method of assessing community resilience. The CRVI hybrid assessment reflects the use of proxy and secondary resilience and vulnerability data to support the status view expressed in the CRVI to provide a hybrid alternative to conventional status and longitudinal assessment ([Béné, 2013](#); [Béné, Frankenberger & Nelson, 2015](#); [Cosco *et al.*, 2016](#); [Cutter, Ash & Emrich,](#)

[2014](#); [Cutter et al., 2008](#)). The capital-centric typology adopted in Chapter 5, 6 and 7 informs the CRVI in this community-centric resilience framework. The CRVI is a qualitative framework ([Marshall & Rossman, 2010](#); [Maxwell, 1992](#); [Saldaña, 2009](#)) built on grounded theory ([Van Vliet, 2008](#)) and focussing on the symbolic activities that humans employ in observing and making sense of their world and themselves ([Bleicher & Bleicher, 1980](#); [Bruner, 1990](#); [Delanty, 2003](#); [Jamal et al., 2015](#)).

CRVI indicator status determination is driven by a narrative understanding of historical disturbance processes and, where possible and appropriate, absorption, adaptation, and transition processes occurring in response to these disturbance ([Béné, 2013](#); [Béné, Frankenberger & Nelson, 2015](#); [Berkes & Ross, 2016](#); [Pelling & Manuel-Navarrete, 2011](#); [Shaw, Scully & Hart, 2014](#)). This is coupled with an understanding of underlying vulnerability causes, their multi-scalar impacts and the main actors involved in fast and slow-onset change ([Pelling & Manuel-Navarrete, 2011](#)).

The challenges of using thresholds in the CRVI as a way of capturing state change and ‘tipping points’ were initially discussed in Chapters 2 and 3 in a multi-capacity social context. This is also important in linking resilience to social roles and the notion of threshold ‘language’ linked to power configurations, self-interest and decision making ([Christensen & Krogman, 2012](#); [Davidson et al., 2016](#); [Wilson, 2012b](#)). In the CRVI, resilience is essentially viewed in status terms to depict communities as either resilient, partially resilient, or vulnerable reflecting ‘intermediate outcome’ statuses ([Adger, 2006](#); [Béné, Frankenberger & Nelson, 2015](#); [Cumming, 2011](#)). Linking resilience theory to the methodology, this status view of ‘intermediate’ outcomes is a ‘means’ rather than an ‘end’ and is loosely framed in

terms of the ex ante and ex post status of key capitals following or during fast or slow-onset disturbances ([Béné, Frankenberger & Nelson, 2015](#)).

The field data is grounded and drives the status of the CRVI indicators directly, reflecting a community-centric interpretation of resilience rather than through theoretical positions. The CRVI framework (see Table 8-1) moves away from focusing on just capitals towards identifying a series of themes that appear to be most decisive in whether a community achieves good levels of resilience or develops vulnerabilities. It is this move from the isolated analysis of individual capitals towards a more integrated and case-study specific analysis (incorporating elements of capitals and resilience processes) that gives the CVRI its hybridity.

The three resilience themes adopted in the CRVI are 1) social learning, 2) livelihoods and 3) housing and services (see Table 8-1).

Emergent Themes	Social learning (Section 8.3)								Livelihoods (Section 8.4)				Housing and services (Section 8.5)				
Emergent Indicators	social networks	social hubs	communication	community events	social actors	social memory & tradition	identity & place attachment	intergenerational learning	fishing livelihoods	non-fishing livelihoods	multifunctionality and pluriactivity	seasonality	poverty	housing affordability	second homes	holiday homes	services

Table 8-1 : CRVI framework - Source : ([Author](#))

Within these themes, social indicators of resilience or vulnerability arising from these discussions are also highlighted in the CRVI framework in Table 8-1. Each community resilience indicator was assessed as having a status of either resilient (green), partially resilient (amber) or vulnerable (red) as a result of the assessment of each resilience factor.

The two chapter objectives are now considered further using the lens of the CRVI, commencing with the theme of social learning.

8.3 CRVI : Social learning

Briefly recapping from Chapters 2, 3 and 7, social learning is a critical social resilience process. This is especially important in the retention and utilisation of accumulated community knowledge through historical events and processes. These learning processes may contribute to community resilience and vulnerability by mobilising social capital through the engagement of social actors ([Adger, 2000](#); [Adger, 2011b](#); [Brown, 2016](#); [Gooch & Rigano, 2010](#); [Pelling, 2011](#)). Social learning is primarily concerned with how community members and groups enter into engaged relationships, the evolution of these relationships, how these may (or may not) benefit the community and with how these contribute towards resilient or vulnerable change. Social learning is strongly linked to adaptive capacity and to understanding collective and shared community perspectives. It also invokes an understanding of community identity, place attachment, trust, bonding and bridging, community 'social fabric' and cohesion through the development of social networks ([Huijbens, 2012](#); [Pelling & Manuel-Navarrete, 2011](#); [Putnam, 2000](#); [Wilson, 2012a](#)).

The concept of social learning invokes notions of different adaptive capacities within coupled socio-economic systems at different scales ([Miller et al., 2010](#)). The

cross-scale application and interpretation of social policy poses significant challenges (e.g. see Section 7.4.5) and cumulative community level social learning is intrinsically valuable in the formation, implementation and impact of policy at the local scale ([ibid.](#)). Such discussion is critical in focussing on the importance of the adoption of contextual local learning and understandings in policy planning.

Social learning can be seen in resilience terms as both an ‘intermediate outcome’ and as a process enabling slow or fast-onset change ([Pelling, 2011](#); [Pelling & Manuel-Navarrete, 2011](#)). This poses analytical challenges because examining social learning requires the investigation of multiple interlinked and sometimes confounding factors and few longitudinal studies explicitly exploring the nature and effects of social learning are available ([Berkes & Ross, 2013](#); [Berkes & Ross, 2016](#)).

In the social learning CRVI theme table (see Table 8-2) there are eight identified community resilience and vulnerability indicators. For example, within this theme, the assessment of the ‘social actors’ resilience/vulnerability indicator in Polperro was regarded as vulnerable (red). The bottom row in this table denotes the assessed resilience of the community at the ‘social learning’ theme level⁷⁴ as a notional overall view of the resilience ‘tendency’ of the ‘combined’ indicators. The relative and arguable ‘value’ to resilience research of such a ‘combined’ view is debated later in this chapter.

The social learning CRVI theme table is depicted below (Table 8-2).

⁷⁴ The same technique was adopted for two other CRVI theme-indicator tables (Tables 8-3 and 8-4) and the aggregated CRVI theme-indicator table (Table 8-5).

Resilience theme	Resilience/vulnerability indicator	Mousehole	Polperro	Mevagissey
Social learning (Section 8.3)	social networks	resilient	vulnerable	resilient
	social hubs	resilient	vulnerable	resilient
	communication	resilient	vulnerable	resilient
	community events	resilient	vulnerable	resilient
	social actors	resilient	vulnerable	resilient
	social memory & tradition	resilient	partially resilient	resilient
	identity & place attachment	resilient	partially resilient	resilient
	intergenerational learning	partially resilient	partially resilient	resilient
	Social learning theme tendency	resilient	vulnerable	resilient

Table 8-2 : Social learning CRVI : community contrasts - Source : ([Author](#))

The social learning theme component of the CRVI primarily reframes the analysis undertaken in Chapter 7 through the CRVI.

Social networks

Social networks, the first indicator in this theme, as discussed in Chapters 2 and 7 (see also Section 7.5.4), is a key driver in community agency and the ‘social fabric’ of communities ([Huijbens, 2012](#)). Social networks contribute towards the building and retention of cultural and community ‘cohesion’ and promote shock absorption, recovery, collaboration, bonding and bridging, identity retention, self-organisation, and adaptability. The CRVI table indicates a ‘social networks’ indicator status of resilience for Mousehole and Mevagissey and vulnerability for Polperro. Polperro expresses vulnerabilities through stress factors in its weak, small and declining social networks while Mevagissey has solid networks skewed towards fishers and Mousehole has broader, strong and stable residential social networks. The historical social trajectory of Mousehole is fundamentally dissimilar to Mevagissey and Polperro, as discussed in Chapter 7. Mousehole was an ‘early adopter’ of the tourism boom in the 1960s, and learned early lessons in social

change driven by its adaptation to tourism. Degradation of social networks can be relatively fast, measured in sub-decadal timescales (e.g. Polperro). The movement of fishing activities from Mousehole to Newlyn was a tipping point that affected social networks through the impact of second homes and holiday homes (see Chapter 6). This can directly contribute to a vulnerability generating process in social networks as exemplified in Polperro, where a tipping point appears imminent through its degraded social networks having traversed absorption and adaptation processes through reduced socio-economic adaptive capacity.

Social hubs

The CRVI table denotes a 'social hubs' indicator status of resilience for Mousehole and Mevagissey and a (marked) vulnerability for Polperro. The status for this subjective indicator assessment is based on the number of hubs in the community and their qualitative utility, persistence, trajectory and multifunctionality.

Hubs provide encounter opportunities for extant and new residents, second home owners, visitors and 'holiday homers' to engage with others and to help integration or transition into community life, as highlighted in Chapters 2 and 7 ([Gallent, 2007](#)). The existence and use of community social hubs can influence the behaviour of communities and consequent resilience (or vulnerability) may not benefit (or indeed disadvantage) everyone. Actor agency is critical in the retention of existing and novel social infrastructure.

Mevagissey is subtly different from the other two communities in two regards, firstly, in that it formed a social co-operative (the MSC) as a multifunctional community initiative and secondly, in that it provides a rare example of a new major

multifunctional social infrastructure, the MAC (Mevagissey Activity Centre). This is an example of investment in community infrastructure evident in both Mevagissey and Mousehole (the multifunctional Solomon Browne Hall) but not evidenced in Polperro.

In Polperro, the village hall provides adequate facilities for the low volume of social groups. The British Legion club in Polperro is in decline and little used, driven through a reducing core population in the winter and the 'dead' social spaces caused by holiday and second homes. This has steered the British Legion to being a social hub trajectory on the verge of collapse. The threshold point for this collapse is the fast-declining use of this facility. The trajectory of social hub infrastructure in Mevagissey and Mousehole is more stable and more beneficial to the community social sphere.

Communication

The 'communication' indicator is important as it conveys a sense of how intra-community conversations evolve in tandem with the power configurations that may influence these conversations and personal agency within the case communities. The CRVI table suggests a 'communication' indicator status of resilient for Mousehole and Mevagissey and vulnerable for Polperro. The status for this indicator assessment stems from evidence of physical communication media, such as noticeboards and fly-postings, which can build or negate agency through the provision of public information.

Communication in communities relays issues of importance by creating shared meanings, making information more durable, helping to negate internal community alienation and fragmentation, and the building of social agency (see

Chapters 2 and 7). Event advertising using telegraph poles was evident in Mousehole and Polperro, but not in Mevagissey. Expired events were still advertised in Polperro while only current events were advertised in Mousehole, suggesting that these adverts were 'posted and forgotten' in Polperro. As discussed in Chapter 7, notice boards told a story of council governance and business control in Polperro, while Mousehole had an open and public access notice board and Mevagissey had a combination of both secured noticeboards and open access boards. Mousehole, in line with its libertarian (and very Cornish) liberal democratic values, has open access to its noticeboards. This implies a higher presence of open social networks in Mousehole and Mevagissey suggesting a higher degree of social agency in these two communities relative to Polperro.

Community events

The 'community events' indicator status suggests resilience for Mousehole and Mevagissey and vulnerability for Polperro. Status assessment is derived from the longitudinal impact of socially orientated events at the case community level linked to their heritage, contribution to community cohesion, social memory, and the economy (covered in more detail in Section 8.4).

Community events are an important and highly visible aspect of community cohesion that reinforces social memory, and 'pulls people together' from within and without the community. Events also project both the 'lived' and 'tourist gaze' 'identities' of fishing communities as discussed in Chapters 2 and 7. Festivals and events provide authenticity and uniqueness to coastal fishing communities ([Derrett, 2002](#); [Derrett, 2003](#)), especially those with events capturing or projecting inherently

indigenous values. Festivals are also a social investment for improving resilience through bonding, bridging and linking ([Putnam, 2002](#)), shared celebration, excitement, joy, and expressions of local heritage.

Mevagissey has traditionally held its fish-orientated Feast Week in the summer months, while Mousehole hosts a major festival in the winter, along with the bi-annual summer traditional working-boat heritage festival. Polperro hosts a music festival in the summer months with generic tourist-orientated, but not locally cultural themes. Mousehole and Mevagissey festivals are supported by public donations and fund-raising while the Polperro Music Festival is supported primarily by local businesses with weaker linkages to local heritage and fishing than the other two communities. Mousehole has a very active year-round social schedule at the British Legion club, as does the MSC in Mevagissey but Polperro is socially inactive in the winter. Polperro's British Legion Club is in decline as a result of a reducing permanent population. There were no observed weddings in Polperro whilst several weddings were observed in Mousehole and Mevagissey.

The Mousehole winter festival is an adaptive coping strategy against the vulnerabilities bought on by seasonal socio-economic factors (see Chapter 6). In Mevagissey, the year-long social agenda suggests resilience, while in Polperro a low-level of social activity suggests vulnerability driven by multiple factors and primarily loss of a core population. The processes that have driven festival and community events are more economic than socially driven in Polperro, and more socially than economic driven in Mousehole and Polperro.

Social actors

The CRVI table indicates that the status of the 'social actors' indicator expresses resilience for Mousehole and Mevagissey and vulnerability for Polperro. As discussed in Chapter 2, the status for this indicator assessment is less concerned with community actor numbers and more with the capacity for actions and activity by these actors in driving social change vis-à-vis the other communities ([Béné, Frankenberger & Nelson, 2015](#); [Constas, Frankenberger & Hoddinott, 2014](#)). In this status assessment, it is clear that Mousehole and Mevagissey drive local initiatives from within the community through the 'active-agents' and 'super attenders' discussed in Chapter 7 ([Bandura, 2006](#); [Magis, 2010](#); [Shaw, Scully & Hart, 2014](#)). Initiatives such as the Solomon Browne Hall provide examples of endogenous 'super-attenders' who drive initiatives not based on 'formal' notions of leadership, as discussed in Chapters 2 and 7 ([Hopkins, 2008](#); [Van Vliet, 2000](#); [Wilson, 2015b](#)). In contrast, Polperro expresses power through formal governance, i.e. the Parish Council, and less through social agency and social actors. A threshold may be emerging, driven by an absence of social actors in Polperro which exacerbates a slow-onset loss of community services coupled to a loss of social physical infrastructure to exogenous ownership. This supports the theory of an onset of vulnerability transition created by a lack of adaptive capacity in Polperro.

Social memory and tradition

The 'community events' indicator suggests resilience for Mousehole and Mevagissey and partial resilience for Polperro. Status assessment is derived here from active usage or conservation of social memory through maritime disaster,

cultural contemporary and folklore iconography, and the conservation of traditional crafts such as boatbuilding discussed in Chapters 2 and 7.

Shared emotional community responses to loss of life at sea are common across the case communities. Community mourning triggered by loss at sea, as discussed in Chapter 7 ([Highfield, 2002](#)), was evident across the three communities. The Penlee disaster in Mousehole left its social memory embedded in Mousehole through imagery and memory locally and nationwide. Tragedies in Mevagissey and Polperro had similar local-scale impacts. Fishing communities 'pull together' through social cohesion and bonding to build support systems in times of tragedy ([Pahl-Wostl, 2007](#)).

Traditional crafts such as boatbuilding were strongly represented through the maritime festival in Mousehole and the boatyard in Mevagissey, along with the presence of local traditional boats. Heritage exhibits of past crafts were evident in the museums at Polperro and Mevagissey. Polperro does not convey an active expression of traditional crafts, except in the curated museum. This is surprising as Polperro has a heritage harbour architecture aesthetically suited to traditional boats.

Polperro and Mevagissey express little local cultural folklore. The core iconography of fish and fishing is expressed strongly in Mevagissey, less strongly in Polperro, and weakly in Mousehole. Mousehole expresses its strong marine heritage through extensive local art, especially in the Ship Inn, where generations of locals have images of their seafaring and shore lives pinned to the walls and beams. The processes that have driven tradition and social memory in Mousehole are its unwillingness to bend to commercial doctrines of imagery, whilst in Mevagissey commercial imagery is evident but not significant as the active fishing industry is a longitudinal living heritage process with no signs of decline. Polperro has yielded to

commercial pressures in its imagery over the last two decades and its social memory and tradition has declined as a consequence, driven by a declining core population and the socio-economically 'punishing' seasonal winter 'close-down' process.

Identity and place attachment

This indicator status suggests resilience for Mousehole and Mevagissey and partial resilience for Polperro. Status assessment is derived from relative heritage authenticity. This is discussed for the case communities in terms of 'real' versus 'reinvented' or 'reimagined' notions of community identity in Chapters 2 and 7 through ideas of self-identity and place attachment. Notions of community identity are complex, fluid and multi-dimensional as discussed in Chapter 2. 'Imagined' or contrived fishing village identity is important in how communities are perceived both externally and internally and can be 'manipulated' to express 'desirable' characteristics that may be very divergent from authenticity ([Adger et al., 2011](#); [Claesson, Robertson & Hall-Arber, 2005](#); [Delanty, 2003](#); [Kennedy, 2013](#); [Pahl, 2005](#); [Ross, 2013](#); [Ross, 2015](#)).

Polperro signage identifies the village as an 'historical fishing village' while Mevagissey expresses itself as a 'working fishing community'. Mousehole has the simple sign 'Mousehole' and does not promote itself through road signage. It may not need to as it has a strong extant identity through tourism. Mousehole and Mevagissey are not overwhelmed with signage and contrived or exaggerated identity, as occurs in Polperro. This is important as signage expresses the way in which a community wishes to be perceived and may be steered by tourist business drivers. Mousehole imagery is the most 'authentic' from a conservation perspective on the basis of its heritage imagery and lack of visual modernity. Mevagissey

expresses a very strong self-identity of fishing followed by Polperro and then Mousehole.

Mevagissey has a visual identity and adaptive capacity-building blend of active fishing and a strong tourist economy. Mousehole also expresses aspects of being a 'virtual' fishing community in its focus on festival traditions and community, with many active resident fishers. Polperro has significantly less fishing than Mevagissey; nevertheless, its residents feel they have a strong identity as a 'fishing community'.

In Mousehole, fishing, as a core commercial activity, has long since disappeared. The maintained presence of 'lived' fishing knowledge through social learning may act as a 'brake' on the trajectory of some communities to 'theme park status' discussed in Chapter 7. Polperro has suffered in its contemporary 'Disneyfied' image through a loss of social learning and the heavy onset of commercialism ([Kennedy & Kingcome, 1998](#); [Kennedy, 2013](#)). Other important resilience processes at work are a loss of traditional core community as the 'traditional' population ages in fishing communities and is replaced by 'dead' social space, as discussed in Chapters 2 and 7. This is further accompanied by a loss of culture and tradition. Mousehole, by virtue of the number of resident fishers and members of the fishing industry, has strong connections to 'localised' fishing, even though it has little community fishing. This challenges research ([Adger, 1999a](#); [Brookfield, 2005](#); [Marshall & Marshall, 2007](#); [Martindale, 2012](#); [Ross, 2013](#); [Ross, 2015](#)) that defines fishing communities solely in active fishing terms, discussed in Chapters 2, 6 and 7, as dependencies on local fishing should not be considered as a unique social resilience driver ([Adger, *ibid.*](#)).

Intergenerational learning

The ‘intergenerational learning’ indicator status suggests partial resilience for Mousehole and Polperro and resilience for Mevagissey. Indicator status assessment is derived from assessments of the ability of the case communities’ capacity to pass cultural heritage learning down through the generations through fishing and traditional heritage skills such as boatbuilding.

To recap, intergenerational learning is a critical aspect of social learning, as discussed in Chapters 2, 3, 5 and 7, and this resilience factor is viewed as an iterative learning process. Social learning has a multiple and cumulative impact on social resilience, especially in the continuum of community traditions, succession (fishing and other), culture, skills, identity and anticipatory decision-making through the formation of social networks and the making of real memories through community events ([Bandura, 1976](#); [Bandura, 2006](#); [Berkes & Ross, 2016](#); [Claesson, Robertson & Hall-Arber, 2005](#); [Derrett, 2002](#); [Derrett, 2003](#); [Masten, 2001](#); [Pelling & Manuel-Navarrete, 2011](#)). Community fishing succession is firmly connected to intergenerational skills and cultural transfer ([Acott, 2011](#); [Urquhart, 2014](#); [Urquhart, Acott & Zhao, 2013](#); [Urquhart & Acott, 2013](#)).

Mousehole has little prospect of intergenerational fishing-skill learning from active fishers (as fishing has all but disappeared), while 8% of Polperro fishers (1) and 10% (6) of Mevagissey fishers are under 21. This is important because small, local scale fishing (e.g. Polperro) is more vulnerable to intergenerational skill loss than larger scale fishing operations (e.g. Mevagissey), and is also an indication of the local investment and faith that people place in fishing. There are many drivers

that may deter young people away from fishing such as well paid, 'safer' jobs elsewhere, anti-social hours and investment issues, as discussed in Chapter 6.

Mousehole (technically) has an intergenerational vulnerability through its local fishing practices but is a moot point as fishing has already moved away, forming a significant threshold and tipping point event. However, some Mousehole residents fish elsewhere, especially in the winter months and it can be argued that fishing skills are not being lost at the individual level within the community. This suggests some resilience in intergenerational skill transfer. Mevagissey has a traditional working boatyard, whilst both Mevagissey and Polperro have heritage museums that are vehicles for learning at the local level but are not 'genuine' foci of intergenerational skills based learning. The key process of fishing activity changes is shifting away from primary and secondary sector based skills to tertiary skills. This directly influences intergenerational learning adaptive capacity in both Mousehole (fast-onset change) and Polperro (slow-onset change).

8.4 CRVI : Livelihoods

Livelihoods are a fundamental aspect of any community's ability to survive and encompass more than earning money as income. Livelihoods are highly dependent on factors such as capability as well as the availability of employment. As discussed in Chapter 4, up to the Victorian era, Cornish livelihoods were predominantly primary resource extraction based, and pluriactive. The industrial revolution and technological change drove the development of transport links and the subsequent expansion of tourism. These events, coupled with constraints on fishing activities as discussed in Chapters 4 and 5, have been drivers of change in the case study communities. A set of primary extraction industries in decline

([Martindale, 2012](#)), coupled with a burgeoning heritage tourism industry, has changed Cornish livelihood landscapes away from local pluriactivity livelihoods towards livelihoods that have dependencies on a globalised world economy and increasing exposure to exogenous power configurations.

The four sector macro-economic theory ([Kenessey, 1987](#)) (see Fig. 4-2) provides a useful framework to discuss general livelihoods, including the fishing livelihoods already discussed (see Table 8-3). Building on this, livelihood sector changes at the community level traverse a transition process, moving from historical primary resource extraction livelihoods to varying 'hybrids' of all four sectors. This is important as the balance between livelihood sectors may denote their resilience pathways and their ability to cope and maintain or build adaptive capacity through a 'portfolio' of livelihoods.

Today, these livelihood sector distributions have developed and changed, as discussed in Chapters 5 and 6 and summarised below :

- In Polperro, there is a small presence of primary activity, no secondary activities, major tertiary activities, and no observable quaternary activities.
- In Mousehole, there is a very minor presence of primary activities, no secondary activities, major tertiary activities, and minor quaternary activities.
- In Mevagissey, there is a significant presence of primary activities, minor secondary activities, significant tertiary activities, and minor quaternary educational activities involved with traditional boatbuilding.⁷⁵

⁷⁵ Boatbuilding in conjunction with the National Maritime Museum of Cornwall in Falmouth (NMMC).

This section will discuss how the key livelihood resilience factors shown in Table 8-3 are manifested in the case study communities and why this important for the case communities.

Resilience theme	Resilience/vulnerability indicator	Mousehole	Polperro	Mevagissey
Livelihoods (Section 8.4)	fishing livelihoods	partially resilient	partially resilient	resilient
	non-fishing livelihoods	resilient	vulnerable	partially resilient
	multifunctionality and pluriactivity	partially resilient	resilient	resilient
	seasonality	resilient	vulnerable	resilient
	poverty	partially resilient	vulnerable	partially resilient
	Livelihoods theme tendency	resilient	vulnerable	resilient

Table 8-3 : Livelihoods CRVI : community contrasts - Source : ([Author](#))

This section will also reflect on how drivers of change have influenced resilience statuses, processes and pathway dependencies at the community level.

Fishing livelihoods

The fishing livelihoods indicator status suggests partial resilience for Mousehole and Polperro and resilience for Mevagissey. Indicator status assessment is derived from community fishing capacity and contributions to community livelihoods (where applicable).

As Chapters 4, 5 and 6 highlighted, fishing is an uncertain, dangerous and precarious form of labour that is now deeply embedded in a contemporary neoliberal economy. Governance mechanisms in fishing have encouraged neoliberal activities through the partial commoditisation of fishing rights that has merged the right to fish with financial institutions. This is a vulnerability for many smaller scale fishers.

In longitudinal terms, since the 1970s, Polperro has fared badly as a result of a slow-onset decline in fishing. This has been exacerbated by a lack of adaptation

that has arguably left the community at a threshold of transitioning towards further vulnerability. Mousehole undertook an early transition and was a successful adopter of Cornwall's embryonic tourism industry stemming from its sudden transition from active fishing to near zero fishing activities. Mevagissey has successfully grown and retained its fishing activities and its supporting business services to become the most significant fish landing port in Cornwall. Mevagissey has a significant economic and livelihood dependency on fishing, followed by Polperro, then Mousehole. In Mevagissey, there is a strong local presence of support services coupled to fishing serving as 'fishing associated' livelihoods.

Research suggests that fishers no longer view traditional pluriactive approaches by fishers as a viable option amongst fishers in the English Channel (see Chapter 4 and 5) ([Acott, 2011](#)). Mevagissey has vessel access for all boat types for all tidal states across the year. Mousehole and Polperro are constrained in harbour vessel access, especially for larger boats. Mevagissey has also seen significant multi-million pound EU FLAG investment in its harbour infrastructure, while Polperro and Mousehole have seen little investment.

Adaptive marketing coping strategies can increase fisher profit margins. In Mousehole, direct local sales were undertaken by, for example, Mousehole Fish using internet services such as Twitter™. This strategy avoids auction fees and direct transport costs and retains profits at the local fisher scale. Such adaptive resilient strategies are yet to appear in Mevagissey or Polperro, although Mevagissey improved its profits by controlling and shortening its supply chain using its fishing co-operative (which failed in the 1990s). Another factor is the market that yields the most profit to the fisher. This is particularly true of spider crab sales to

Spain from Mevagissey, where sales are dependent on activity and market drivers at an international scale (this may have vulnerability implications post Brexit).

Consistent succession activities are important to the long-term resilience and even the survival of fishing communities, as described in Chapter 5. Encouragement for fishing may occur through child socialisation by parents, active fishers, and educational organisations such as schools and the CFPO. Encouragement for youngsters into commercial fishing through training has met with significant success in UK through the FLAG programme, but Mevagissey is the only case community to promote and build succession capacity as resilience through this process. Community returners drawn back to their 'home' communities to fish commercially were evident in Mevagissey. Bureaucracy and 'red tape' was a consistent cross-community issue highlighted in Chapter 5, and a factor in succession decision-making as well as pressures on (generally female) unpaid administration work.

Non-fishing livelihoods

The non-fishing livelihoods status indicator suggests resilience for Mousehole, vulnerability for Polperro and partial resilience for Mevagissey. Indicator status assessment is derived from non-fishing livelihood contributions to the local economy and exposure to other scales of exogenous control and business ownership. Sectorial shifts as a process in the secondary manufacturing sector and the tertiary retail and service sector, as well as evidence of the 'knowledge economy' quaternary sector, are also factors in this status assessment.

Secondary sector livelihoods through manufacturing disappeared in the 20th Century in Polperro, have a very minor presence in Mousehole⁷⁶, and a small presence in Mevagissey. Manufacturing has traditionally been connected to the fishing industry in the case communities, as have other primary extraction industries. There is a logical correlation between fishing decline and secondary sector manufacturing decline, and a subsequent loss of diversity of these livelihoods linked to fishing.

Tertiary sector local-service livelihoods may (or may not in the case of Polperro) be supported by the growth of second homes and holiday homes through maintenance work. Holiday home growth is driven through commercial investment and changes in property use, discussed in Chapters 4 and 6. Polperro has the highest proportion of property owned by exogenous businesses. While some holiday homes provide service sector work for local trades, they are becoming increasingly 'exogenously managed assets' with maintenance 'outsourced' to services based on scales outside of the community; this was most prevalent in Polperro. There is little impact on local trades in Mousehole, which retains a high degree of local labour (see Chapter 6). A critical consequence of this outsourcing process is that it *decouples* community livelihoods from the community. This generates two significant and linked processes; a shift from local home affordability, and an increased exposure to socio-economic processes operating at other scales. Polperro is locked into an accelerating vulnerability trajectory and is rapidly losing ownership, agency and influence in the infrastructure and livelihoods of its community.

Retail and service sector employment dominates Mousehole and is geared strongly towards the tourist market, and has been a slow-onset process of

⁷⁶ Cetacean Research Technology.

adaptation to tourism drivers since the fishing tipping point of the 1960s. Strong localism is expressed in Mousehole through extensive local business ownership and operation, discussed in Chapters 5 and 6. In Mevagissey, national 'chain' stores occupy much of the tourist consumption landscape, while Mousehole and Polperro have none. Polperro's retail and service business dominates its livelihood landscape. In Polperro, four vacant shops were found in the village⁷⁷, a unique finding in the case study communities⁷⁸, suggesting a fast-onset vulnerability-building process, a view further supported by evidence of degrading social networks and social infrastructure.

Multifunctionality and pluriactivity

The 'multifunctionality' status indicator suggests partial resilience for Mousehole and resilience for Polperro and Mevagissey. The factors that influence this indicator are the adaptive capacity expressed by the case communities to repurpose existing community 'assets' and aspects of pluriactivity (which can be contextually interpreted as either resilient or vulnerable).

Multifunctionality, and pluriactivity, as discussed in Chapter 6, can provide a degree of resilience to community livelihoods by giving residents a 'portfolio' of livelihoods (pluriactivity) or multiple uses of the same resources (multifunctionality). Examples of multifunctionality include repurposing a fishing boat for tourism or a harbour area for tourists as well as fishing activities, as discussed in Chapter 6. Pluriactivity examples are people-centric multiple livelihoods, e.g. a combination of fishing and lorry driving. In resilience terms pluriactivity provides diversity by promoting adaptive capacity and reducing risk or 'lock-in' to a specific job and its

⁷⁷ At time of fieldwork.

⁷⁸ More recent communications (2016) indicate this has now increased to five.

specific vulnerabilities, e.g. employer/employee power configurations or employment sector volatility. Conversely, pluriactivity may be a 'trade-off' response to limited employment options e.g. one job of fishing; this may consequently be termed as a vulnerability.

Mevagissey and Polperro repurpose fishing vessels (around four in each community), while Mousehole does not demonstrate such multifunctionality. For fishers, alternate livelihoods are limited to activities based on and from their vessels such as eco-tours and leisure fishing trips as trade-offs. On land, an example of multifunctionality is the Solomon Brown Hall in Mousehole, which is being repurposed with multiple social and heritage objectives.

Examples of pluriactivity in the case communities spanned a wide spectrum of livelihoods. For example, one part-time Mousehole fisher also worked as an electrician as well as a part-time assistant harbourmaster.

In Polperro, the expansion of holiday homes and the exogenous service of these homes has led to a reduction in pluriactive employment as local trades people are not being utilised and, thus, it becomes more difficult to balance trades with other forms of income, e.g. fishing or seasonal agricultural work. Contemporary tourism and services, coupled to seasonality, effectively drives the majority of pluriactive options. This is not necessarily a 'bad' thing, as fast-onset fish quota reductions in the 1970s could have led to economic vulnerability, even without the onset of tourism. In Mousehole, there is a strong local tradesperson economy servicing exogenously owned properties and a significant retirement community. In addition, in Mousehole, the service industry supports pluriactive working in pubs, hotels and restaurants for a larger proportion of the year than Polperro and Mevagissey (see Chapter 6). This is important because Mousehole can then retain a higher volume of

service sector employment for more of the year than Mevagissey or Polperro. Mevagissey retains a core fishing pool of livelihoods and this is very important in coping with seasonality, discussed next.

Seasonality

The seasons determine many aspects of fishing community lives, from the rough winter seas preventing fishing to the summer season that is the key period for tourism in Cornwall. Cornish coastal communities have had to adapt in many ways to cope with this. Seasonality is a continuous process⁷⁹ and the three case study communities have responded to the influences of the seasons in different ways. The seasonality status indicator for both Mousehole and Mevagissey indicate resilience. In Polperro, the status is assessed as vulnerable.

Seasonality drives many aspects of rural economies and this is a critical resilience factor in how the case communities have responded to seasonal determinants of livelihoods. Seasonality is closely linked to pluriactivity and multifunctional adaptive capacity and tourism in coastal communities as discussed in Chapters 2, 5, 6 and 7 and the previous section.

Mousehole enhances its seasonal resilience through the extension of its tourist season through its two winter festivals, extending the retail and service job seasonal 'window' (estimated at around seven to eight months a year in total). The Mevagissey and Polperro tourist season window is more 'traditional', running from Easter (late March) to August, or around six months a year total. These figures are significant, as Mousehole may have a 'tourist season' roughly 15% to 30% longer

⁷⁹ However, climate change is having a slow impact on local seasonality on a global basis.

than the other two communities through the adoption of 'economic livelihood bridges' spanning the winter.

Mevagissey retains resilience through its successful fishing operations and its strong social life over the winter period as tourism declines (see above). It does not exhibit the characteristics of being a 'ghost town' and has an active social scene in the winter months.

Polperro is particularly seasonally vulnerable due to its relatively high dependence on tourists, high volumes of holiday and second homes allied to a short tourist season and lack of alternate employment or neighbouring communities increases vulnerability with little adaptive capacity to cope with this. Polperro is a socio-economically vulnerable 'ghost town' over the winter season, further weakened by degraded social networks and the car park issue.

Poverty

The poverty status indicator suggests that Mousehole expresses partial resilience in its expression of poverty, as does Mevagissey whereas Polperro expresses distinct vulnerability.

Poverty has become associated with primary extraction industries around the world, and this is true of Cornwall. In Chapter 5, Cornwall was depicted as being in almost continual economic decline for more than a century, and is one of the poorest parts of the UK and the EU. Also highlighted were the inconsistencies between Cornwall's long-term poverty and policy challenges, its poor economic success as a region, and the links between fishing and poverty. In Chapter 6, it was suggested that it is not lack of resources which drives poverty in fishing communities, but the influence of socio-economic pressures deriving from institutions and commercial free

market pressures. Poverty may be hidden or 'pocketed' in coastal areas and not isolated to the more obviously deprived central inland areas. Poverty is also linked to multi-scalar processes of in-migration associated with a declining Cornish economy since the 1960s and is a deprivation continuum. Cornwall is an area which is still one of the poorest regions of the UK, yet it also attracts the very wealthy. In terms of multiple deprivation indices (see Chapter 6), Polperro is in the most vulnerable 27% of the whole UK, Mevagissey within 30% and Mousehole within 34%. These data suggest a greater propensity for poverty in Polperro than within the other two communities. This may be linked to marginalisation and social exclusion in Polperro.

In Polperro, poorer members of the community have been slowly displaced to the geographical margins of the village as a slow-onset process that began with social housing policies in the 1960s and which has continued through the acquisition of residential properties for second and holiday homes. The decline in fishing and other primary-sector livelihoods in Polperro combined with the village's geographical and topological isolation and lack of adaptive capacity further contributes to long-term poverty and vulnerability. In Mevagissey, poverty is present but not to the same degree. Mousehole has a relatively wealthy community, a high incidence of home ownership and high housing costs. However, Mousehole still expresses many elements of poverty evident from the census data and residents may be 'asset rich and cash poor', particularly families that have been residents over generations rather than newer arrivals.

8.5 CRVI : Housing and services

Chapters 5, 6 and 7 highlighted that housing costs are an important and ongoing issue in all the case communities. Exogenous housing ownership, remotely

driven economies and escalating prices are seen as threats to housing stock access by many residents, caused largely by second homes and holiday homes ([Farstad, 2013](#); [Gallent, 2007](#); [Kennedy, 2013](#); [Pitkänen, Adamiak & Halseth, 2014](#)). Second homes present an area of conflict across Cornwall that has been linked to differences in the economic and political capital held by ‘second homers’ and longer-term residents.

This was particularly prominent in second and holiday home debates in Mevagissey and the wider Cornish political issues discussed in Chapter 4. These debates are varied in nature but all involve power, agency and influence imbalances. For example, in Helford (see Section 4.4), second home owners were able to hire an expensive barrister to support their cause to block fishers from building a jetty to comply with EU health directives. Other emotive issues discussed in Chapter 5 and 6 were social housing and the onset of gentrification.

The impact of second homes and holiday homes (see Chapter 6) is often cited as a causal factor in the degradation of local services, e.g. schools, doctor’s surgeries, libraries, and taxi services, that have led to the emergence of service deserts, discussed in Chapter 4, that are compounded by highly seasonal tourist economies ([Hope, 2008](#); [Martindale, 2012](#); [McManus *et al.*, 2012](#); [Wilson, 2010](#))..

The resilience indicators under discussion in this section are outlined below in Table 8-4.

Resilience theme	Resilience/vulnerability indicator	Mousehole	Polperro	Mevagissey
Housing and services (Section 8.5)	housing affordability	vulnerable	vulnerable	partially resilient
	second homes	vulnerable	vulnerable	partially resilient
	holiday homes	partially resilient	vulnerable	partially resilient
	services	resilient	vulnerable	resilient
	Housing and services theme tendency	vulnerable	vulnerable	partially resilient

Table 8-4 : Housing and services CRVI : community contrasts - Source : ([Author](#))

These indicators provide a framework to discuss resilience and vulnerability in housing and services across the case communities.

Housing affordability

The housing affordability indicator reflects that Mousehole and Polperro are vulnerable and Mevagissey expresses partial resilience. The drivers influencing this assessment were relative income levels, processes of historical and contemporary house price rises, social and affordable home availability, and the influence of tourism as well as second and holiday homes (discussed in subsequent sections).

Housing affordability remains a serious issue for coastal community families and individuals wishing to remain in the communities where they may have family. Low incomes in Cornwall have been a long-standing issue. Homes were historically available for people on low incomes, but a trajectory of actively increasing house prices has been evident since the 1960s. As discussed in Chapter 6, in Cornwall, average house prices are very high and average Cornwall incomes are far below national averages, creating a 'double hit' for residents and their families. Mevagissey is the most affordable place for residents to buy homes, followed by Polperro, and then Mousehole. However, general prices far outstrip earnings. High house prices thus exclude most low-paid workers from the housing market. Families, as an adaptive strategy, may move to neighbouring communities to buy bigger or cheaper properties, e.g. in Penzance or Newlyn in the case of Mousehole. Other strategies have been to second mortgage the original property, move to another house in a less expensive area, and rent out the original property as a holiday home.

Similar practices were not directly observed in Mevagissey and Polperro, but may also happen there.

Further implications for the case communities are that house prices both drive and accelerate the process of changing community composition by precipitating both out-migration and in-migration. The speed of community outmigration trajectories may be heavily influenced over one or two generations.

Social housing is almost non-existent in Mousehole, high in Polperro and relatively low in Mevagissey. The only new housing was in Mevagissey, two recent affordable housing projects discussed in Section 6.5.

This means there are few social and no affordable housing options in Mousehole, in Polperro there is a high level of social housing but no affordable housing, and in Mevagissey there are some social and affordable housing initiatives. Field data suggest a general lack of affordable homes across the three communities (see Chapter 6). The Mevagissey Parish Council has shown bold ambitions to support and deliver affordable housing, something not evident in the other two communities. The issue of affordable homes features strongly in rural academic literature and affordable housing is a critical factor driving social change in the case community housing landscape ([Davison *et al.*, 2016](#); [Guardian, 2012b](#); [Paris, 2008](#)).

Second homes

The status for the second homes indicator suggests that Mousehole and Polperro are vulnerable and Mevagissey enjoys partial resilience. The assessment drivers include impact on social spaces, social network changes, services and local employment. Second homes are also closely linked with housing affordability but

deserve specific mention to separate out the impact of second homes and holidays homes discussed in the next section.

Second homes can be triggers for vulnerability through impacts on social agency, reinforcement of power configurations, reduced social spaces, community cohesion and tensions, as well as the changes in social networks discussed in Chapter 7. Second homes have been cited as a factor in the creation of service deserts and gentrification (or neighbourhood displacement), both of which can be regarded as features of vulnerability. The process of gentrification applies to both domestic housing and businesses, leading to social exclusion driven by increased housing costs and subsequent intergenerational housing market exclusion (described in Chapter 6). Gentrification is becoming established in Mousehole through exogenous housing acquisition, coupled with a minimal level of social housing and no affordable homes. Polperro is even more gentrified while also being typified by a loss of social spaces and extensive social housing concealed from the 'tourist gaze'. Mevagissey has a more diverse balance of affordable home initiatives and some social housing. Retirement hotspots can also be considered to be areas of gentrification involving change and retirement migration processes ([Paris, 2008](#)).

Properties partially occupied around the year impact services and contribute to 'housing bubbles' in Cornwall (see Chapter 6). Research suggests that in the case of static housing supply caused by planning restricted housing markets, second homes constitute an inflationary pressure on the housing market ([ibid.](#)). All the case communities are additionally situated in conservation zones⁸⁰ which constrains change and development in community infrastructure. One knock-on effect is that new housing sales inertia sets in, and housing stock experiences inflationary

⁸⁰ A conservation area is an area of special architectural or historic interest with a character or appearance that is desirable to preserve or enhance (Cornwall County Council terms of reference).

pressures due to low supply and high exogenous demand, further exacerbating the housing issue. Second homes additionally weaken opportunities for lower income residents to purchase housing. This phenomenon is expressed more clearly in Mousehole than the other communities (see Chapter 6).

The growth of second homes in Mousehole was initiated earlier than in the other two communities discussed in Chapters 6 and 7. Mousehole was an early entrant to a form of cultural tourism, likely giving it some early lessons in how to manage processes created by the onset of wide-scale tourism.

Holiday homes

The holiday home status suggests that, overall, holiday homes contribute to vulnerability in Polperro, whilst in both Mousehole and Mevagissey, impact is expressed in partial resilience terms. The assessment of this indicator is derived from the impact of holiday homes on businesses and local skilled tradesmen, and an increase in 'dead' social space.

Holiday homes differ fundamentally from second homes in that they are dedicated commercial properties registered as business assets (Chapter 6) and geographical ownership may be difficult to determine. Holiday homes are estimated at around 8% of Mousehole and Mevagissey housing, and around 30%⁸¹ in Polperro (see Chapter 6). This is very important from three resilience perspectives. First, holiday homes are good for business 'footfall' because they provide a high, regular and cyclical (though seasonal) turnover of clients, as described in Chapter 6. Second, maintenance opportunities for local skilled tradespeople may be improved

⁸¹ CCC figures indicate 14% but research observations suggest much higher figures at around 30% (see Section 8.2.1).

by exogenously sourced labour markets, as described in the previous section, or local labour. Third, holiday homes may also create 'dead' social space over the winter months and contribute towards service depletion as the permanent population decreases.

Mousehole has a low incidence of holiday homes, which seems remarkable considering the early ingress of Mousehole into tourism. One explanation is that changes of property use are limited through a process of strict planning controls (see Chapter 6) and local resistance.

There were no empty residences (i.e. abandoned or derelict) in any of the case communities. CCC policy permits repurposing of such properties to holiday or second homes discussed in Chapter 6. In the case communities, no evidence was found of these types of properties, thus limiting this repurposing.

Services

These observations suggest that, overall, the 'services' resilience indicator suggests vulnerability in Polperro, while in Mousehole and Mevagissey services are resilient. Assessment includes processes and factors driving loss of services in response to a declining core population, power configurations and policy impacts.

The creation of 'service deserts' (or reductions in community services) is thought to be driven by changes in community composition created by holiday homes and second homes coupled with in-migration and out-migration. In Chapter 6, the discussion turned to community level services such as transport, parking, and flood control, and the cumulative impact of government induced cuts to services. Key issues were disproportionate policy-based service reductions, a loss of community

agency, and the aforementioned impact of holiday and second homes ([Hope, 2008](#); [Martindale, 2012](#); [McManus et al., 2012](#); [Wilson, 2010](#)).

A reduction in services has several interesting impacts. Firstly, a community may not receive its normal level of service or facility provision (e.g. public toilets, waste collection). Second home owners and holiday homes are not included in population statistics driving funding policy, even when council tax is being collected for the properties, including second homes. Thus, lower service levels are delivered, further exacerbated by austerity measures that drain services from core residents, particularly in Polperro. Secondly, loss of schools, libraries and other social hubs, accompanied by an increase in 'dead social space', can lead to a trajectory of increasing dependence on tourism and seasonal trade, processes again most evident in Polperro. A harsh but successful battle over the retention of the primary school has retained the resilience of this important school service in Mousehole ([Caudle, 2015](#)). Thirdly, a loss of services is not an attractive proposition to prospective incoming families as increasing second and holiday home growth further degrades services. Fourthly, service reductions resulting from governmental austerity policies can promote gentrification through a process of selectivity that favours the building of gentrified communities through the actions of increased house prices. This may drive a lack of options for lower income families, driving reduced adaptive capacity and increasing vulnerability.

In Polperro, the issue of parking (see Chapter 6) was identified by respondents as a major contributor to the emergence of a 'service desert' created by increased parking charges and a lack of agency caused by exogenous ownership of the car park. There are few other parking options in Polperro and the community is 'locked-in' to this situation by the power exerted by this business. This poses a local

service access issue that is perceived to be ‘throttling’ the mobility of the local community. The opportunity for the CCC as an actor to purchase the Polperro car park has now long passed. The opportunity existed to support the community resilience of Polperro over the long term through a potential purchase. ‘Short-termism’ strategies by the CCC thwarted this resilience building prospect reflected by a county councillor (see Section 6.4) who observed planning being undertaken in three to five year timescales thus preventing longer term (decadal scale) resilience building opportunities. The car park is a critical community resilience factor in Polperro and, significantly, spans all three CRVI resilience themes through its impact as a single issue.

An infrequent and minimal bus service increases the ‘socio-geographic isolation’ of Polperro, while Mevagissey has better transport links, and is also close to other towns such as St Austell. This suggests that service reduction is not as high an impact issue in Mevagissey as it is in Polperro but is, nonetheless, on a diminishing service trajectory.

Mousehole has good transport services and is less rural than Polperro. Services are effectively a continuation of Newlyn and Penzance services that provide good bus access (and links to a mainline train station in Penzance).

8.6 Community resilience implications

In this chapter, three resilience themes have been assessed across the case communities: 1) social learning; 2) livelihoods; and 3) housing and services. This section will link these socio-economic, policy and services discussions to form a resilience-framed perspective of the implications for these communities and possible

future trajectories. Table 8-5 is a combined view of the three thematic resilience tables (Tables 8.2, 8.3 and 8.4).

Resilience theme	Resilience/vulnerability indicator	Mousehole	Polperro	Mevagissey
Social learning (Section 8.3)	social networks	resilient	vulnerable	resilient
	social hubs	resilient	vulnerable	resilient
	communication	resilient	vulnerable	resilient
	community events	resilient	vulnerable	resilient
	social actors	resilient	vulnerable	resilient
	social memory & tradition	resilient	partially resilient	resilient
	identity & place attachment	resilient	partially resilient	resilient
	intergenerational learning	partially resilient	partially resilient	resilient
	Social learning theme tendency	resilient	vulnerable	resilient
Livelihoods (Section 8.4)	fishing livelihoods	partially resilient	partially resilient	resilient
	non-fishing livelihoods	resilient	vulnerable	partially resilient
	multifunctionality and pluriactivity	partially resilient	resilient	resilient
	seasonality	resilient	vulnerable	resilient
	poverty	partially resilient	vulnerable	partially resilient
	Livelihoods theme tendency	resilient	vulnerable	resilient
Housing and services (Section 8.5)	housing affordability	vulnerable	vulnerable	partially resilient
	second homes	vulnerable	vulnerable	partially resilient
	holiday homes	partially resilient	vulnerable	partially resilient
	services	resilient	vulnerable	resilient
	Housing and services theme tendency	vulnerable	vulnerable	partially resilient
Overall community resilience tendency		partially resilient	vulnerable	resilient

Table 8-5 : Combined thematic resilience table - Source : ([Author](#))

The emergent themes in this chapter are predominantly situated within the core resilience fields of ‘human development’ and ‘disasters and risk reduction’ framed within the academic resilience fields outlined by Brown ([2014](#)).

8.6.1 Typological implications and the CRVI

Overview

Recapping from Sections 2.6, 3.4.9 and 8.2, the CRVI evolved during this research in two stages. The firstly was a primarily capital-based typological approach to resilience analysis of the grounded data in Chapters 6 and 7, followed by further evolution of the CRVI in this chapter framed within, and closely aligned with resilience and vulnerability perspectives ([Béné, Frankenberger & Nelson, 2015](#); [Brown, 2014](#); [Pelling & Manuel-Navarrete, 2011](#); [Wilson, 2012a](#)). Actors at different scales, along with disturbance or shock/stress factors underlying vulnerability, are used in combination with resilience processes (shock absorption, adaptive capacity and transition potential) where possible and appropriate in the CRVI ([Béné, Frankenberger & Nelson, 2015](#)). Core resilience factors such as shock absorption, recovery, multi-scalar impact, self-organisation and notions of trajectory ([Wilson, 2015a](#)) also drive this assessment of intermediate outcome indicators. The adoption of an intermediate indicator approach also reflects a 'negotiated community condition' through the grounded approach adopting local actor perceptions in this research ([Scerri & James, 2010](#)). Indicator status was driven by the context specific sets of factors outlined in Sections 8.3, 8.4 and 8.5. The resilience assessment was also supported by the assessment of proxy longitudinal processes and the influence of different drivers where possible.

A prime consideration within this discussion is the contribution of the CRVI to resilience research and its distinctiveness compared with the use of wellbeing and sustainability indicators ([Béné, Frankenberger & Nelson, 2015](#)). The CRVI helps in the development of both status and process views of community resilience ([Bene,](#)

[ibid](#)) in which non-linearity, uncertainty and dynamic change (core features in resilience theory) are not 'lost' within notions of 'absolute' status ([Béné et al., 2012](#); [Wilson, 2015a](#)). As such, resilience can be seen as a part of, and complementary to, sustainability typologies and aspirational goals, an important example of which is climate change, where 'system' response depends upon the absorption capacity of the system and its ability to adapt to changing circumstances ([Milman, 2008](#)).

Sustainability indicators are distinguished from other indicators by their attempts to measure the ability of a system to continue to function consistently over a long time span ([Béné, Frankenberger & Nelson, 2015](#)). In other words, sustainability indicators should 'span' indicators that account for the resilience of the system. As such, resilience denotes more than the inclusion of maintaining given system characteristics; it includes the adaptive capacity of the system, or its ability to adapt to stresses and changes and to transform into more desirable (or, more objectively, different) states ([Milman, 2008](#)).

A core strength of using a sustainability lens is that it is a systematic approach to explore future options with associated metrics and to shape strategies for these options ([Redman, 2014](#)). Thus, sustainability is a normative approach adopting anticipatory thinking ([ibid.](#)). This contrasts with the resilience lens that builds adaptive capacity to cope with expected, but largely unknown shocks and stresses. Resilience does not require a prediction of outcomes and differs from sustainability through the building of adaptive capacity to enhance a community's potential to cope with shock and unknown futures ([Folke, 2006](#); [Folke & Gunderson, 2010](#); [Redman, 2014](#)). As Redman ([ibid.](#)) states simply, sustainability prioritizes outcomes while resilience prioritises process. Sustainability and resilience assessments have much to offer each other by assessing either (fundamentally) process based approaches or

outcome based approaches independently or utilising resilience thought within a sustainability lens to gain the benefit of both approaches in coping with future threats and change ([Chapin et al., 2007](#); [Derissen, Quaas & Baumgärtner, 2011](#)).

In this research, for example, housing affordability can be observed through the processes of absorption, adaptation and resilience-building described in Chapters 6 and 7. Importantly, cumulative shocks ([Pelling & High, 2005](#)) emerge through multiple drivers such as second homes, holiday homes and the decline in primary resource extraction activities. These shocks influence communities at different speeds and over different timescales, as was seen in Polperro, where the community has lost its ability to absorb the *cumulative combination* effects of these shocks. Nested adaptive cycles are useful to view these changes at different speeds and scales ([Pelling & Manuel-Navarrete, 2011](#)).

Thus, the resilience and vulnerability indicators adopted in this research could have further potential when combined with assessments of options for long-term sustainability in coastal communities. The strengths and pitfalls of using the CRVI are now discussed.

Typology strengths

1. The typology highlights the importance of scale in resilience analysis, and the consequences of the loss of community agency where power has been displaced to different scales e.g. the Polperro car park issue. Power configurations have also been shown to be an important factor in the typology. An example of this is the 'abdication' of accountability by the UK government discussed in Section 7.4.5. This example also links this 'abdication' to the dangers of assumptions and

misinterpretation in using a resilience lens without qualifying the underlying processes through their ability to maintain resilience (or vulnerability) attributes over time.

2. Mixed methodological, actor-orientated methods adopted in the data collected for the CRVI also help in creating multiple perspectives and beneficial triangulation benefits. The actor-orientated field methodology employed is critical in the CRVI articulation. This typology offers a 'bridge' linking 'real' grounded field data to resilience and vulnerability theory. The framework couples resilience processes (where possible) and vulnerability assessments, and, critically, the framework is actor-orientated. This is useful in articulating resilience in combination with vulnerability assessments to policymakers. This responds to criticisms of status-based assessments by providing assessment of both resilience and vulnerability processes assessment where appropriate.
3. The CRVI performs a useful role in describing how resilience can be viewed through a dynamic indicator lens, where shock and stress factors and processes contribute to a 'dynamic' status indicator status that facilitates the development of proxy longitudinal perspectives. As discussed in Chapter 2, a contribution of this research is in utilising qualitative resilience indicators in the CRVI to highlight the nature of communities through 'negotiated condition' indicators, and not as remotely perceived 'hard metric' 'facts' which are often viewed as outcomes in their own right ([Scerri & James, 2010](#)).
4. The CRVI is useful in articulating how some members of communities are disadvantaged by power configurations and uneven agency within communities. Further, it helps to illuminate that these power configurations may be viewed as resilient but may have evolved through self-interest and in directions that

generate vulnerabilities for others in communities. Community agency is perhaps the most critical approach highlighted in the CRVI in this research.

5. Stemming from the previous point, agency also involves assessment of the adaptive capacity that the CRVI facilitates and of cumulative and *combinational* views of adaptive capacity at the community level through narratives and indicators. This is important as it encompasses non-linear expressions of change and impact at different speeds and scales.
6. The measurement of resilience has long been a vexed issue in interdisciplinary academic debate ([Béné, 2013](#); [Böhringer & Jochem, 2007](#); [Constas, Frankenberg & Hoddinott, 2014](#); [Cumming, 2005](#); [Jepson, 2007](#); [Renschler et al., 2010](#); [Sherrieb, Norris & Galea, 2010](#)). The CRVI does not attempt to create a quantitative measurement typology; rather it provides a community-orientated index of adaptive capacity and vulnerability from the proxy and status view of the case communities. Importantly and linking further to sustainability, the indicators are not intended to express outcomes and, instead, focuses on intermediate states, so is not an 'outcome' orientated typology.
7. There is a need to examine resilience issues to a greater extent in terms of social learning and to understand the capacities of coupled systems for critical policy application and consequent change ([Miller et al., 2010](#)). This framework typology further enables this discussion. This is especially pertinent in considering the unexpected consequences of policies and interventions where self-interest has process and shock ramifications for communities. The Polperro car park ownership issue led to multiple unexpected (or at least unforeseen) impacts on the community through its new power configuration. This reduced business footfall and constrained residential parking and thus access to services such as

the medical clinic and church. The analysis of the impact of processes (along with diligence and accountability) within the community might go some way to foreseeing such eventualities. Resilience studies such as this help to understand the processes and multi-factorial and multi-scale implications of such business transactions that go beyond basic concepts of 'value for money' to a true understanding of the social implications of such actions for communities.

8. With regard to policy, there is a need to create enough jobs for incumbent residents and a surplus to support the continuing number of in-migrants. Cornwall has increased its population without a corresponding growth in livelihood opportunities ([Williams, 2008](#)). This is important because population growth-led policy has been driven by quaternary sector growth such as the growth of knowledge workers, hi-tech industry and higher and further educational establishments and student populations. This policy has not focused on the lived circumstances of coastal communities and has often sought solutions to Cornwall from outside of Cornwall. In-migration has also been a factor in a demographic trend towards older residents in the case communities compared to Cornwall as a whole (see Fig. 7-1). Whilst detailed demographic data were not collected on a community level in this research, this nonetheless remains an important development policy pathway that has been much criticized ([Willett, 2009](#); [Williams, 2008](#)).
9. Epistemological considerations in this typology, as discussed in Chapter 2, highlight this research as being focussed firmly in the domain of constructivist⁸² research framed in social and development studies and, thus, not embedded in positivist natural science aspects of resilience theory and SES. This is important

⁸² Adaptation includes changes in identity and wellbeing including humanity's relation with the non-human (Pelling, 2011).

as this research was, by design, intended to link with more recent theoretical notions of resilience framed within social and development science progress.

10. The two-stage evolution of the typology from an initial capital assessment allows an additional perspective of a rich resilient and vulnerability narrative framed in capital transitions. This moves away from a capital assessment to the resilience-framed CRVI. There are merits in using a two-stage process that incorporates an initial capital-based data capture; however, the typology could work effectively through data capture derived directly from the CRVI as future work from the findings of this research.
11. The typology helps unpack the salient resilience and vulnerability issues affecting communities by uncovering processes and dependencies influential at the community level. Examples of this are the fast-onset power configuration changes from community incomers (e.g. Mousehole) and slow-onset indicators in social networks in the 'core' community that indicate mixed community resilience benefits.
12. The typology encourages interdisciplinary analysis of the narratives underlying the assessment of indicators and the CRVI moves away from output to process-based research as an integrated technique for understanding the factors influencing community resilience ([Davidson et al., 2016](#); [Miller et al., 2010](#)).
13. The CRVI has deliberately adopted a qualitative and inductive approach that allows multiple resiliences (such as power configurations and agency) to be interpreted across multiple themes. This is a move away from resilience research framed entirely around capitals assessment as multiple capitals may be affected by processes affecting resilience, such as power. The flexibility of the CRVI helps

in the analysis of power configurations and other factors influence resilience statuses and processes.

14. The CRVI was found to be a useful technique for analysing the status of multiple intermediate outcome indicators in an easily comparable tabular format.

Typology weaknesses

- a) The use of visual status indicators in the CRVI does not immediately indicate a) the trajectory of indicators or b) expose the underlying processes driving this indicator. While the CRVI does counteract this by describing processes and shock/stress drivers as part of its narrative, it is essential that the interpretation of indicators is clearly guided as revealing intermediate resilience outcomes as a hybrid of state and process and not in absolute state terms.
- b) Linked to the previous point, the CRVI deliberately does not prioritise some resilience indicators as having more impact than others. In some resilience research, weighting factors are adopted to introduce a level of quantification and hierarchy. This is not a useful approach in this research and, arguably, in resilience research in general because it requires subjective interpretations of the relative significance of different factors that may align poorly with community understandings. The adoption of trichotomy indicators in this research is deliberate for simplicity and to maintain closer reference to the underlying stress/shock factors and process narratives affecting community resilience. The consolidated CRVI view (Table 8-5) instead provides a full view of indicators across different themes and communities to provide a 'rolled-up' view of general-theme and overall-resilience tendencies for each community. While this is useful,

it should be reiterated that a factor's influence on overall resilience may not be uniform in relation to others, and a deliberate choice was made not to apply weighting multipliers to the indicators to maintain the simplicity of the resilience typology and to prevent introduction of further confounding factors.

- c) A future visual refinement to the CRVI might include indicators suggesting the direction in which each the indicator is 'heading' e.g. are social networks moving along in a vulnerable trajectory and, further, is the indicator in an identifiable process of absorption, adaption or transition and what processes are affecting the direction of travel.
- d) In addition, the CRVI is inherently subjective and based on notions of what is 'good or bad' or 'resilient or vulnerable' for communities. Thus interpretations of resilience are influenced by the positionality and reflexivity of the researcher.
- e) This research has not adopted the use of thresholds through detailed analysis of nested adaptive cycles. However, the CRVI typology does not exclude this as a potentially important approach to resilience research.

8.6.2 Appropriateness of capital utility and the CRVI

As discussed in Chapter 2, the operationalization of resilience goes well beyond the basic notion of buffering against shocks ([Cosco et al., 2016](#); [Davidson et al., 2016](#); [Marshall & Marshall, 2007](#)) and ultimately endeavours to improve material wellbeing conditions. This necessitates the recognition of power and agency relationships that may build resilience or promote inequality and contribute to vulnerability ([Pelling, 2011](#)).

Resilience in this research assesses the building, maintenance and reinforcement of the persistence, adaptation and transformative capacity of communities ([Béné, Frankenberger & Nelson, 2015](#); [Brown, 2014](#); [Brown, 2016](#)).

Notions of resilience underpin this discussion on capital utility. The use of capitals in this research has served to drive out the salient community issues framed in capital terms through direct fieldwork in Chapters 5, 6 and 7 and reframed through resilience concepts in this chapter. As discussed in Chapter 6, a weakness in a capital approach is that, by definition, it adopts a capital (or domain) centric lens and tends to exclude other, more process-related perspectives. Resilience can be observed through many lenses of scale, multifactorial views and panarchy or nested adaptive systems that adopt non-linear views ([Pelling & Manuel-Navarrete, 2011](#)). These non-linear views allow a better view of the processes and events or factors influencing the status of indicators ([Béné et al., 2016](#); [Béné, Frankenberger & Nelson, 2015](#); [Béné et al., 2014](#); [Pelling & Manuel-Navarrete, 2011](#)). Nested adaptive cycles and other resilient system views of community do not necessarily benefit from a 'monolithic' capital constraint and require a flexible framework based on theoretical resilience views. In short, the intermediate objective of resilience is to build adaptive capacity for the factors that influence resilience and vulnerability by assessing multiple capacities.

As was discussed in Chapter 6, criticisms have been raised about attempts to compare different forms of capital that are not easily commensurable, especially forms of economic and social capital ([Haynes, 2009](#)). Social capital and economic capital also have very different inter-capital measurement perspectives, the former usually focussed on community, or micro-level qualitative perspectives (e.g. social networks), and the latter lending itself to more quantitative macro level, e.g. the

financial models discussed in Chapters 2 and 3 ([Béné et al., 2012](#)). A further weakness of capital assessment is that capitals may not have a common 'language' or understandings within different academic disciplines. This can create interdisciplinary problems in developing shared interpretations, e.g. financial system resilience has different implications and scales than social network resilience. However, common language is also a problem within resilient theory itself, as was discussed in the analysis of the multiple strands of resilience theory evolution in Chapter 2 ([Davidson, 2010](#); [Davidson et al., 2016](#); [Miller et al., 2010](#)).

Absorption, adaptation and transformation processes in resilience research are inherently complex and contested in social systems. Indeed, Pelling ([2011](#)) suggests that we know far less about the notion of transformation than we do of what a resilient system might look like. The use of inter-capital state analyses is less useful than the hybrid 'state and process' approach used in this research. Status based resilience views can be augmented using process and system views. Nevertheless, transformational views are still a 'slippery concept' in resilience research ([Pelling & Manuel-Navarrete, 2011](#)).

A further, and important, critique is that social capital is not a 'capital' at all and is a misleading metaphor when used in relation to economic capital. Further, the use of 'linear' economic principles in social capital is a 'contagion' to the richness and socially 'value' laden aspects of sociological theory and practice ([Pelling & High, 2005](#)). Issues of causality are a major issue in the adoption of social capital. This is especially important when issues of circularity appear to exist obfuscating specific causes of impact in social system process views ([Masten, 2001](#); [Ungar, 2011](#)). Social capital is difficult enough to define, but it is 'impossible' to measure ([Haynes, 2009](#)).

Other weaknesses of adopting capital techniques in resilience research include the idea that power is a relational concept in social capital rather than a structural one ([Pelling & Manuel-Navarrete, 2011](#)). This accentuates the need to adopt a shift from monolithic capital approaches to facilitate the analysis of dynamic social systems. This can include nested adaptive systems and the status, process and transformation approach adopted in this research in a conscious move away from the use of capital 'models'.

Domain-based approaches, and the benefits and deficits of moving away from it, and especially assessing social resilience through a community lens, is built-upon through the design and adoption of the CRVI typology in this chapter. The use of capitals, as discussed in Sections 6.8.2 and 7.5.2, can form inflexible theoretical 'silos'. These may not be directly appropriate in community level research that seeks to undertake resilience assessments in terms of system dynamics ([Chaskin et al., 2006](#); [Pelling & High, 2005](#); [Poortinga, 2011](#); [Woolcock & Narayan, 2000](#)). However, as an initial methodological analytical technique, the analysis of capitals has been beneficial in driving out community issues from the fieldwork rather than directly adopting resilience themes methodologically. This is discussed in more detail in Chapter 9.

8.6.3 Threshold development and the CRVI

Challenges (as discussed in Chapter 2) with the use of thresholds include their interpretation as breakpoints, or junctures, through which a new social resilience 'status' is derived. Such issues are embedded in the social dimension of resilience ([Christensen & Krogman, 2012](#)). Some resilience thresholds were identified in the

analyses in Chapter 6 and 7 where they were clearly observable. Thresholds are a real challenge in their meaningful adoption in social systems ([ibid.](#)) discussed more in this section.

Social roles may provide a useful role in explaining the nuanced dynamics of culture, environment and society for SES adaptive capacity and, critically, the utility of social threshold 'language' in power configurations. The use of social thresholds recognises how communities themselves can interpret social change and challenges within extant social memory ([ibid.](#)). This is a critical focus of the use of thresholds in this research supporting the use of grounded research directly at the community level. 'Tipping point' thresholds have been determined in some instances in the supporting assessments in Chapters 6 and 7. These thresholds are manifested as status change in the CRVI indicators. This change can be understood as the breakpoint between two regimes e.g. between absorption and adaptation, when a resilience capacity has been transcended as discussed in Chapter 2 ([Pelling & Manuel-Navarrete, 2011](#)).

The CRVI presents resilience and vulnerability indicators in a table form by status. The underpinning processes (where identified) are presented in supporting narratives. It is crucial in the use of the CRVI that this table view is evaluated in *conjunction* with this narrative (this also presents future opportunities to present status and process visually together).

The development of social thresholds can be described as collectively recognised points which signify new experiences ([Christensen & Krogman, 2012](#)). This is better aligned to the dynamism inherent in social-science approaches than to the forms of 'hard' tipping points that might be depicted using capitals-based quantitative changes. While only some indicators in this research are underpinned by analyses of

process and changes in response to these 'new experiences', the development of thresholds in this research is primarily through qualitative assessment with a small degree of quantitative analysis (e.g. number of identifiable social networks). The use of absorptive, adaptive and transitional thresholds was beneficial in capturing linkages to 'experiential change' thresholds ([Christensen & Krogman, 2012](#)) using grounded community empirical data ([Béné, Frankenberger & Nelson, 2015](#); [Pelling & Manuel-Navarrete, 2011](#)), although this was not feasible for all resilience indicators. An example of this grounded approach, as described in Chapter 2, is the 'social actors' resilience indicator status that is determined by the actions of these actors to drive social change. The threshold observed for this indicator was that of acts of community activism as adaptation (and not absorption), indicating a state change. Several other key thresholds were identified as having significant impact in the case communities. The loss of fishing in Mousehole in the 1960s was met by a strong adaptive response to the onset to tourism. This was an active adaptive option that re-oriented the community and halted a shift into 'unknown' forms of transitional change. Additionally, this was a fast-onset event that produced a slow adaptive response. The threshold was identified as the temporal point of migration of commercial fishing to Newlyn.

In Polperro, a slow-onset loss of community houses to second homes and holiday homes led to another experiential change that included a decline in core population and a decline in social networks. One interviewee in Polperro suggested that the social life of Polperro will disappear if the British Legion Club eventually closes down. This may represent a threshold where absorptive capacity may be breached, and in the absence of sufficient adaptive capacity, transition towards alternative futures seems to be the current trajectory. It is likely that the community is

already in transition towards gentrification, as suggested in Chapters 6 and 7, and any thresholds encompassing absorption and adaptation have already been ‘overtopped’.

Power is a particularly important aspect of threshold changes, as it is a relational concept as described in Section 8.6.2 spanning multiple scales and driven by multiple factors with multiple intermediate outcomes. The Polperro car park purchase issue provides a particularly good example of ‘cascading’, or multi-scalar, power configurations spanning multiple resilience indicators. The thresholds of experience encountered through loss of community services led to fewer locals frequenting village shops and making them less likely to participate in local social events due to parking issues. Hence, the study of power and events as drivers of community change is a critical aspect of using the ‘language of the thresholds’ in cumulative effect assessments ([Christensen & Krogman, 2012](#); [Habermas, 1985](#)).

8.7 Community resilience futures

The social trajectory of Mousehole differs fundamentally from Mevagissey and Polperro in another important consideration (see Chapters 5 and 7). Mousehole drastically reduced its fishing activities in the 1930s and was an ‘early adopter’ of the tourism boom in Cornwall that also made it attractive to film and cultural celebrities in the 1960s (see Chapters 5, 6 and 7). Mousehole consequently became renowned for being a socially eclectic and artistically-orientated community, a feature still evident today.

Interviews across Mousehole suggest a general decline in social networks within the lifetime of many older residents and concerns were expressed that it may

not yet have reached the 'bottom' of this trajectory (see Chapter 7), despite it still exhibiting strong social tendencies. While this concern might seem misplaced in Mousehole considering its current strong social networks, it may be these were historically even stronger than today. In Polperro, social networks were weak in the community at large but were strong within the small local fishing networks. Mousehole expresses a more positive outlook as a community. Its strengths are its strong endogenous social networks and social aspirations, along with its socio-economic connections with neighbouring Newlyn. Its vulnerabilities as a community revolve around housing, especially social housing, which is of a very low volume. Mousehole is a community with a strong social tradition and this is one factor attracting second home purchases. However, Mousehole continues to have a strong and to some degree self-reinforcing social infrastructure.

Fishing communities in Cornwall are subject to many common exogenous socio-economic drivers, such as austerity in public services, fishing quotas, structural problems in the wider economy, tourism, and severe weather events. Other factors linked to globalisation also exert differential effects on communities depending on their level of exposure to the world economy, e.g. fish export prices or 'chain stores' in communities. The ability for a community to balance exposure to the wider economic forces and to manage its local economy is a critical factor. Trajectories of community resilience are a combination of endogenous and exogenous drivers as well as unknowns.

The first implication of the broad current vulnerability observed in Polperro is that it is highly dependent on re-stimulating tourism that suffered particularly after the tragic events of 9/11 in the USA. Polperro is also likely to suffer another shock post-Brexit due to its inherent vulnerabilities that may push the community into some form

of transition. Secondly, it is very likely to become even more vulnerable through this underlying dependence on tourism coupled to its weak social infrastructure.

Polperro's socio-economical vulnerability is being further exacerbated by ongoing government-induced reductions in community services in a community that already has a high level of pocketed poverty and degrading social housing. Weak social networks and a declining economy, coupled with a high level of dependency on business interests, significant poverty, geographical isolation, and the negative influences of seasonality, have pushed Polperro into this vulnerability trajectory. Polperro is the most seasonally vulnerable of the three communities due to its inability to adopt a more diverse mix of livelihoods. Polperro clearly emerges as the most problematic case community in social resilience terms (see also Table 8-5).

Mevagissey is arguably the most socially resilient of the three communities because of its strong dual-sector economic diversity (see Chapters 6 and 7). This is only really weakened by issues with housing affordability, which is a Cornwall-wide issue but one that is most pronounced in coastal communities. The strength of its fishing community, a strong intergenerational base for future fishers, its natural double-harbour, its co-operative tendencies, and its strong social networks are important factors contributing to a stronger resilience 'profile'. Allied with forward looking and collaborative leadership in fishing activities, strong community hubs and social networks provide Mevagissey with a solid foundation for its socio-economic future and strong seasonal resilience. Housing and services are likely to remain an issue in the current economic climate but the strong socio-economic foundation is a strong long-term resilience factor. The adoption of social thresholds through community agency may benefit communities, and especially Polperro that still has

opportunities for the greater co-management of key thresholds such as parking access and affordability issues.

8.8 Conclusions

This chapter set out three objectives for assessment and analysis: the CRVI typology; the utility of capitals-based resilience assessment; and analysis of the use of thresholds in resilience research.

Firstly, the CRVI was examined through its design, evolution and operationalisation as an intermediate indicator-based resilience typology. The CRVI makes resilience more tangible and also enables a hybrid approach to resilience research by combining status-based views with analysis of key resilience processes.

The use of the CRVI in tandem with sustainability indicators is a promising complementary approach to resilience research that enables simultaneous exploration of status, process and non-linear resilience factors. The CRVI benefits from mixed method triangulation that underpins triangulation using longitudinal hybrid views from proxy and secondary data. This is especially useful in exposing fast and slow-onset power configurations (an under-researched resilience notion) and can provide cumulative and combinational views of changes in adaptive capacity (which underpins the CRVI). The CRVI does not attempt to measure resilience quantitatively with the exception of the simple trichotomy and intermediate status assessment. The CRVI has helped to analyse complex socio-economic resilience issues such as the Polperro car park and the unexpected consequences of policy-making on issues such as community infrastructure. The CRVI is designed to

provide an easily comparable view of the status of resilience indicators, although it does not allow a quick view of the resilience and vulnerability trajectories that are embedded in the underlying narrative. This could potentially be built into future versions of the CRVI. Another weakness identified in the operationalisation of the CRVI is that of researcher positionality and subjectivity, a perennial feature of social research. This also introduces issues for the use of longitudinal sampling strategies if different researchers are involved, though this was not an issue in this research.

Secondly, the adoption of capital utility was assessed. Social, economic and natural capitals were initially adopted methodologically within the semi-structured interviews and questionnaires to provide a 'conventional' capitals-based initial research stance.

Capital-focussed assessments limit resilience research for several reasons. First, the use of inflexible capital frameworks hinders analysis of resilience/vulnerability-building processes, non-linear perspectives and uncertainty. Capitals also lack a common language (which is itself a critique of resilience theory) because different forms of capital can be very difficult to compare. Indeed, social capital as discussed is not really a 'capital' per se and difficult to define. Finally, power configurations are relational in a 'network' sense in communities and not 'structural', a constraint of capital 'silos'.

However, the use of capitals proved useful for initial data collection and analysis prior to further work to reframe resilience/vulnerability factors within the context of key resilience ideas.

Thirdly, notions of developing thresholds were considered in this chapter. Importantly, thresholds are considered as junctures in state change between absorption, adaptation and transition. These processes were viewed through a social

perspective lens and notions of 'new and changed experiences' through the community lens were examined as evidence of social resilience change. Again, this is especially important within notions of power configurations and is closely aligned to social resilience theory that has been a core element of this research. A criticism of the use of thresholds in this research is the low degree to they were covered across the multiple resilience indicators (although the CRVI encompasses thresholds in its narratives). Important threshold examples were illustrated e.g. the Polperro car park and Mousehole fishing decline illustrating the processes and scales at work as critical resilience elements. The adoption of co-managed thresholds was discussed as an important collaborative process that could be adopted in the case communities to challenge conventional notions of power configurations and promote greater community agency.

9 Conclusions

9.1 Introduction

The main analytical focus of this chapter is to conclude this study's views of resilience as a concept and to build on a further understanding of slow-onset change processes within communities. The aim of this study (see Chapter 1) was to analyse how social resilience in Cornish fishing communities has been influenced by social, economic, political and natural change over long and short time scales. This has involved a focus on questions of resilience at the community level, where resilience is most commonly associated with well-developed capitals linked to adaptive capacity ([Wilson, 2012a](#)). The objectives of this study (discussed in Chapters 1 and 8) were: a) to examine the typological approach as a way of making more tangible the notion of community resilience and to identify the strengths and pitfalls of the CRVI; b) to evaluate the appropriateness of capitals as a way of analysing resilience; and c) to evaluate the process of threshold development within the CRVI resilience typology.

In Section 9.2, a relative evaluation of resilience is undertaken to examine what insights it provides that other concepts, e.g. community sustainability or community well-being, may struggle to achieve.

Section 9.3 assesses communities where fishing has formed, and still forms part of their identity. This reflects on the uniqueness of fishing communities as a form of community and the possibility of the themes emerging from this research being applied in modified forms to other types of community or social settings.

In Section 9.4, a discussion and synthesis is undertaken to analyse imaginaries of community identity and resilience through signage and forms of

iconography and how these could interact with, and shape community social relations. This serves to structure a view of cultural resilience as a core feature of wellbeing that complements the need for communities to have well-functioning economies and social relations. Further working approaches to enable deeper exploration of the cultural dimensions of resilience are proposed and discussed in relation to potential applications using the CRVI.

In Section 9.5, status, longitudinal process and transformation approaches to resilience research are compared in order to identify the different types of insight each provides to understanding community resilience and to clarify how their use can further enrich understandings of the ways resilience research can be conducted.

Section 9.6 reflects thoughts on the key findings of the study.

9.2 Sustainability and resilience : complementary concepts ?

Whilst this research is not focussed on sustainability, it is important to clarify the challenges that face notions of resilience and sustainability both jointly and respectively, especially in the case of slow-onset change. Synthesising discussions and observations from Chapters 6, 7 and 8, this section aims to analyse the contrasting and complementary features of resilience and sustainability.

Sustainability science seeks to address the major challenges facing society whilst ensuring that human wellbeing is undiminished and the basic Earth systems continue to operate. Resilience can be viewed as more focussed on the processes that might influence these overall goals on a planetary scale ([Redman, 2014](#)). These processes may not be normative in themselves (i.e. may be deemed 'good' or 'bad' for society. However, the overall lens of resilience is a normative one ([Wilson, 2012a](#)).

Sustainability is a discourse about the possibility of, and the ways in which, social, environmental and economic issues can be addressed ([Valentin & Spangenberg, 2000, p.1](#)). Sustainability is concerned with the well-being of current and future generations ([Kuhlman & Farrington, 2010, p.3436](#)) and is arguably a status-orientated and normative concept for defining desirable future states of environmental, economic and social well-being ([Redman, 2014](#)). Sustainability is an integrated framework concerned with interactions between natural and social systems and aims to bridge scientific boundaries and bring concerns to the centre of science and policy ([Brown, 2016](#)). Both resilience and sustainability are used in a similar context in policy rhetoric and international development ([ibid.](#)). Brown ([ibid.](#)) postulates that resilience can augment sustainability by providing increased dynamic views on what a transition to sustainability might actually look like. This has been considered as useful in areas where at least earlier notions of sustainability have failed (e.g. Rio+20) in the eyes of some ([Benson & Craig, 2014](#); [Brown, 2016](#)). The utilisation of thresholds combined with the application of non-linear and uncertainty principles provides the basis for a rethink in the challenges of large scale and irreversible change in the Anthropocene ([ibid.](#)).

So, what do resilience approaches offer community research that is not met through the use of sustainability perspectives to identify future states of well-being and socio-environmental needs ?

Building on Chapter 2, similarities between resilience and sustainability include that they are both flexible and 'malleable' ideas that are both subject to multiple meanings and interpretation. Neither resilience or sustainability capture the necessary constituent factors of being theories but serve as frameworks for ideas, vision and discourse of the various scales of planetary issues challenging

the Anthropocene. Both express contested and normative characteristics and have significant measurement challenges ([Brown, 2014](#); [Redman, 2005](#); [Redman, 2014](#)).

One of the key differentiators between community resilience and sustainability is the greater adoption of process and systems dynamics analysis by resilience research, especially the use of adaptive processes. In resilience theory, process assessment offers an analytical framework to 'track' social systems and periods of collapse in communities, reconstruction, and resilience state changes through notions of absorption (stable), adaptive change and transformation ([Pelling & Manuel-Navarrete, 2011](#)). This allows a view of cycles of incremental and cumulative change. In sustainability science, system dynamics processes are often adopted linking e.g. human and coastal ecosystems, and can adopt notions of non-linearity in modelling terms ([Mavrommati, Bithas & Panayiotidis, 2013](#)) to develop sustainable paths of development. It should be stressed that sustainability science is not dominated by management science, but certainly encapsulates the notion ([Shove & Walker, 2007](#)) and, like resilience thought, stresses the importance of power configurations as real-world issues. Shove and Walker ([ibid.](#)) stress that nested and hierarchical systems are not 'the only model in town' in sustainability science when assessing the emergence, transformation and decay of sociotechnical systems and calls for a loosening of the grip on these hierarchical approaches. Resilience thinking facilitates this notion by further promoting the adoption of non-linear approaches to augment and refine sustainability science in this context through its notions of incremental changes and consequent emergent properties. This can be used to shape interventions through adaptive capacity building within smaller incremental change processes.

This reinforces the emphasis placed in this research on the importance of social learning at the community level.

The identification of underlying processes as a dynamic view can benefit and inform the development of sustainable goals and initiatives through greater clarity of the context of the drivers of change. This can be linked to actor activity to build longer terms goals by being more closely informed of the reality of real-life processes.

Resilience processes can be viewed as better suited to assessing longer-term and broader scale sustainability changes such as community livelihoods and slow-onset change. Examples of this in this research are fisher succession (see Chapter 6) and community festival activities (see Chapter 7), which have evolved as slow-onset development processes and could be used to inform the development of sustainability objectives to improve livelihoods.

Establishing causality through the main factors and processes affecting slow-onset change in social resilience research becomes increasingly complex when processes are observed over long periods e.g. decadal ([Béné, Frankenberger & Nelson, 2015](#); [Cosco et al., 2016](#); [FAO, 2017](#); [UN, 2012](#)). This is a significant issue in the whole premise of resilience thinking in the operationalisation of resilience. Conversely, sustainability has a forward-looking problem-solving emphasis in addressing complexity issues through transitions and often outcome planning. It is suggested here that sustainability is subject to more degrees of uncertainty than resilience approaches through its long term views vis-à-vis the briefer incremental process context of resilience (although these processes may also occupy greater timescales).

Notions of uncertainty are especially relevant to social systems and globalisation processes that span multiple systems at many scales away from the local ([Wilson, 2014](#); [Wilson, 2015a](#)). Slow-onset changes, viewed here as ‘slow cycle’ reactions to shock in nested resilience adaptive systems, are important in understanding temporal and spatial impacts on other systems and scales ([Pelling & Manuel-Navarrete, 2011, 2314](#)). This is viewed in this research through the processes of absorption, adaptation and transformation/transition discussed in Chapters 7 and 8 ([Béné, 2013](#); [Béné, Frankenberger & Nelson, 2015](#); [Berkes & Ross, 2016](#); [Nelson, Adger & Brown, 2007b](#); [Pelling & Manuel-Navarrete, 2011](#); [Shaw, Scully & Hart, 2014](#)). Sustainability does not handle dynamic systems in this way. Resilience and sustainability are quite different in this respect. As this study has shown, slow-onset change creates operational sampling complexities. However, it is probable that this challenge also exists in any slow-onset context in either resilience or sustainability frameworks.

Importantly, slow-onset change can ‘accumulate’ further temporal and scalar dependencies, as demonstrated in the CRVI by slow-onset change through second and holiday homes and their multiple resilience impacts. This was observed in the slow-onset of tourism in the case communities, and the adaptive capacity observed in Mousehole but not in Polperro. The use of process or dynamic assessment helps to highlight internal contradictions and reduce uncertainty and assumptions driven through *a priori* planning ([Pelling & Manuel-Navarrete, 2011](#)).

This study has also shown that resilience is also a more open-ended, emergent and non-linear approach than sustainability, which tends to be more orientated towards developing and achieving goals and objectives through forward

planning ([Brown, 2014](#); [Redman, 2005](#); [Redman, 2014](#)). This is important because uncertainty is a real issue in any complex system, for example climate change mitigation. Planning for uncertainty (planning for not having a plan) is inevitably problematic and resilience thus further informs sustainability views and goals. Notably, slow-change in resilience processes may expose a profound loss of resilience (or more accurately a building of vulnerability), which may be easier to recognise than a resilient system itself ([Davidson *et al.*, 2016](#)). Issues of scales, timeframes and distributions play key roles in the observation of slow-onset change as suggested in this research. As discussed, the adoption of proxy methods using a hybrid approach at appropriate timescales and frequencies (rather than rigidly fixed) can better illustrate slow-onset change through process thresholds and tipping points. This suggests that these process views do help in observing these process shocks as Davidson ([ibid.](#)) suggests rather than more ephemeral static system status views.

An example of this is the decline in Polperro's core community over many years, manifested in the winter exposing the loss of community resilience through the degradation of social networks. This brings a degree of subjective bias into play that researchers need to be aware of in resilience studies.

Resilience is also a 'means towards an end' as discussed in Chapters 2, 6, 7 and 8. Resilience perspectives differ from sustainability views because they are less oriented towards defined 'end states' but may use intervention to realise intermediate outcomes ([Béné, Frankenberger & Nelson, 2015](#)). Thus, resilience is usually a more 'passive' approach that can identify slow-onset community level cyclical trends, stasis and change ([Pelling & Manuel-Navarrete, 2011](#)) but nevertheless also lacks the incorporation of power conceptualisations ([Brown,](#)

[2014](#); [Wilson, 2012a](#); [Wilson, 2012b](#)). Building on this, this study has captured important processes of power e.g. governance lock-ins and business power configurations in Polperro (see Chapters 6 and 7). This is a significant difference, as incremental or intermediate resilience views offer an increased granularity in the analysis of dynamic processes vis-à-vis the (again arguably) outcome-orientated processes of sustainability. The adoption of intermediate assessment is a critical difference in resilience assessments ([Béné, Frankenberger & Nelson, 2015](#)). This represents a crucial difference between outcome-orientated state-based views and that of status coupled to a process-based resilience lens within adaptive cycles as an intermediate view (and not as an outcome). Thus, this reflects snapshot views within notions of system dynamics, as used in this study's CRVI and its hybrid proxy approach to reflect (some) process views. Slow-onset change does permit opportunities for anticipatory community interventions action over long time windows within incremental changes.

However, important issues may not be recognised as significant through their low impact (at that time) and the 'temporal fog' of slow-onset change. Assumptions of linear consequences and the impact of power configurations as 'maladaptions' may occur through anticipatory community decisions. However, over longer timescales this may lead to significant community issues ([Pelling & Manuel-Navarrete, 2011](#); [Roberts, 2010](#)). An example of this is the private purchase of the Polperro car-park, a seemingly innocuous fast-onset event at the time but with significant slow-onset social and economic ramifications discussed in Sections 6.4 and 8.8, where shifts in power configurations become important.

Slow-onset change (in principle) allows a community to undertake adaptive capacity building by offering a 'window of opportunity' while an event is slowly

‘unfolding’ ([Miller et al., 2010](#)). This is commonly expressed as adaptive capacity building e.g. through adoption of multifunctionality with the slow, long-term demise of fishing activities and the degradation of pluriactive options in Polperro. Such anticipatory options are not generally available (by definition) during fast-onset events ([Cutter et al., 2008](#)). However, long-term change can be non-linear, uncertain, unpredictable, and slow-onset change may not necessarily be useful in planning for adaptive capacity e.g. through threshold setting ([Petzold, 2017, p.28](#)). This risks building *unintended* vulnerabilities through such ‘maladaptation’ as demonstrated in the Polperro car park situation and multiple weak regional Cornish development initiatives highlighted in Chapters 6, 7 and 8 (see also [Béné, Frankenberger & Nelson, 2015](#); [Black et al., 2011](#); [UN, 2012](#)).

Importantly, resilience, although, in itself normative or desirable ([Brand & Jax, 2007](#)), may not produce a positive or desirable community scale outcome and may be divergent from positive notions of sustainability ([Berkes & Ross, 2016](#); [Norton, 2005](#)). This has been discussed extensively in this research and resilience characteristics may express beneficial or harmful situations in the same community for different groups or individuals ([Brown, 2014](#); [Wilson, 2015a](#)). Critically, resilience does not normally adopt interventionism (at least in theoretical terms) in contrast to sustainability ([Béné et al., 2012](#)).

Sustainability and resilience : a partnership ?

Resilience and sustainability can complement each other both independently and together ([Berkes & Ross, 2016](#); [Folke & Gunderson, 2010](#); [Saunders & Becker, 2015](#)). Community resilience is considered to be an important indicator of social

sustainability ([Magis, 2010](#); [Valentin & Spangenberg, 2000](#)). Further, a community's resilience determines its ability to successfully mobilize and respond to stress, making resilience integral to social sustainability ([Magis, 2010](#)). In this research, notions of sustainable community livelihoods through resilience are informed in particular through the strength of social learning and networks underpinning adaptive capacity to respond to change. This was particularly evident in the weak social learning and networks of Polperro and the strong social networks of Mousehole, closely informing the longer term livelihood prospects of the communities reflecting this combinational utility of resilience and sustainability.

Resilience has been viewed as embedded in sustainability science for less than a decade ([Berkes & Ross, 2016](#)) and is viewed as complementary to sustainability approaches and aspirational goals ([Béné, Frankenberger & Nelson, 2015](#); [Chapin *et al.*, 2007](#); [Derissen, Quaas & Baumgärtner, 2011](#)). Various views of the interdependencies between resilience and sustainability have been offered. Research suggests various benefits of a separate usage or in combination ([Redman, 2014](#)). This is firstly to ensure the needs of future generations are met economically, socially, culturally, and environmentally (sustainability characteristic) ([ibid.](#)). Secondly, is that of building multiple capacities (resilience characteristic) to both recover from an event, and in the process, improve sustainability practices and adaptive capacity. Using the two frameworks together where contextually appropriate can both foster concepts of change, uncertainty and disequilibrium conjoined with the needs of future generations and can also provide a better argument base for policy making and political lobbying. This is especially appropriate in challenges at the global scale such as Climate Change where more local process

change contexts can be better linked to large scale sustainability aspirations for future generations.

It has been suggested that a community cannot be sustainable unless it has some degree of resilience but that a resilient community could possibly exist in an unsustainable environment ([Saunders & Becker, 2015](#)). This infers that sustainable development cannot be successful without enabling communities to be resilient to hazards and shocks.

A sustainable community thus requires a degree of resilience, but a resilient community does not necessarily need to be sustainable. For example the governance power lock-in in Polperro is, in itself a resilient characteristic, but does little to benefit the longer term sustainability livelihoods of the Polperro community as it is expressed as a vulnerability at the community scale. Resilience research at the community level can be fruitfully undertaken independently of sustainability goals, or embedded in them, giving a valuable traction to sustainability research. By understanding the critical processes at e.g. the community level, this can inform how sustainable objectives can be reasonably set and provide cross-scalar linkage using views of incremental change that in turn, inform more ambitious objectives as a process itself.

A clear example of combining the frameworks is the notion of 'Planetary Boundaries' ([Brown, 2016](#); [Rockstrom et al., 2009](#)) that caused controversy in 2009 by misunderstandings appearing to promote planetary privileges over social ones to maintain the Earth system in a 'resilient and accommodating state' ([Rockstrom, ibid.](#)). This illustrates the significant issues of the framing of human resilience around the scale of human activities and their impact on a finitely resourced planet in sustainability terms. The actual framework design purpose

was to maintain relatively Holocene-like conditions on earth combined with a set of critical Earth system processes at all scales ([ibid.](#)) framed within resilience thinking to understand self-regulating systems through processes which was clarified later and provides an interesting counter perspective of sustainability framed within resilience thinking.

Saunders ([ibid.](#)) underlines that current definitions and frameworks still focus on resilience as focussed in short-time scales primarily through a misconceived view of incremental changes being of small time duration. Adaptive cycles can widely vary in temporal scale and granularity through the adoption of nested views (see Chapter 2) which challenges this premise. This stands in contrast to a perceived view that sustainability generally represents views over longer timescales.

To illustrate this, the differences between resilience and sustainability become most evident where recovery from a disaster happens over longer term timescales, e.g. where communities are hit by multiple vulnerability generating events or recovery is long and difficult, most visibly in fast-onset catastrophic events. An example of this was the 2005 Hurricane Katrina events in Louisiana ([Colten & Sumpter, 2009](#); [Colten, Hay & Giancarlo, 2012](#)) where, to this day, the US government has not taken effective action to restore the infrastructure and opportunities to rebuild the community and resilience. This example illustrates how slow-onset vulnerability can be driven through a fast-onset event and that the sustainability plans in place with FEMA could not be activated well because of their inability to deal with multiple close-linked emergent events. This was also an product of inept planning and disgraceful treatment of the indigenous people of New Orleans by the US administration of the time. There was no obvious occurrence of such cumulative fast-onset multiple events in the case communities observed. However,

the impact can be much subtler in slow-onset change driven by drivers which do not appear to be particularly conspicuous as discussed in Chapter 2, 5 and 7 illustrating operational difficulties in recognising processes which can be catastrophic in the long term.

Members of resilient communities can intentionally develop personal agency and collective adaptive capacity in engaging, responding to, and influencing, change to sustain and renew the community, and to develop new trajectories for the community's 'future' ([Magis, 2010](#)). Brown ([2014](#)) and Redman ([2014](#)) iterate that resilience is not about predicting community outcomes but about building capacity and that sustainability is more closely aligned with societal pathways for future generations in which human well-being is enhanced, and social equity is advanced ([Brown, ibid.](#)). This was particularly evident through 'super-attenders' and collaboration as 'resilient trajectory influencing' traits in Mousehole and Mevagissey, further developing adaptive capacity and local agency. This was not the case in Polperro which has developed a vulnerability trajectory with weak agency and adaptive capacity.

Sustainability and resilience have much to offer each other in their respective and combinational utility, and extending this research into areas of sustainability is a logical and useful application of both disciplines in community and societal wellbeing.

9.3 Community uniqueness and a broader CRVI

A further, forward-looking theme to explore, having now assessed the case communities through fishing (which still forms part of their identity, alongside other characteristics), is how these communities reflect certain types and degrees of

uniqueness in resilience terms. Further, a question is emergent as to how the research themes and approaches (in modified form) might be adopted across a broader range of community types and social settings.

The initial (capital based) fieldwork approach through fishing, economic and social activities highlighted emergent, grounded community issues and produced few examples of 'clear' uniqueness suggesting some homogeneity across the case communities from their common 'ancestry' that share certain identities and traits. However, one evident fishing community 'uniqueness' is whether a community still fishes from the local harbour and can be linked to whether the community expresses characteristics of being a 'virtual' fishing community ([Brookfield, 2005](#)) (see Chapter 2). Generic typologies invariably adopt a trade-off between the use and the specific characteristics and objects of research in case studies ([Counelis, 2000](#); [Yin, 2009](#)). However, the CRVI typology does offer a degree of flexibility in community research. The broader resilience themes adopted in the CRVI of social learning, livelihoods and housing and services are sufficiently generic to be utilised within other rural communities, or even urban communities (in principal). The adoption of the extant resilience theme indicators is relevant for 'generic' social communities in the social learning and housing and services themes. The livelihoods theme presents a clear challenge through its context-specific fishing and non-fishing CRVI indicators that would require modification for generic use. However, if a dominant historical livelihood was evident in a different community setting, the fishing context would bear substitution in the CRVI typology.

It is the general impact of seasonality coupled with the powerful and dominant drivers of tourism (e.g. housing and community composition) influencing community change that underpins this research and has the most significant impact on

resilience in Cornish coastal communities. Generically, the CRVI approach (with modifications such as the fishing elements) could be adopted in many rural and urban environments but may be more applicable to community-orientated environments driven by tourism with common traditional cultures (such as in Cornwall). Use of the extant CRVI could be adopted for tourist dominated coastal areas such as the Scilly Islands, Devon, Dorset, Wales, Scotland and other areas of the world such as Maine in the US, Arctic Canada and Queensland in Australia that experience challenges for indigenous communities, tourism, housing and ensuing gentrification.

9.4 Future research : from socio-political to cultural resilience

The main lens of this thesis is focussed on the lived/perceived realities within the case study coastal communities. However, scope exists for interesting analyses of imaginaries of community identity and resilience through signage and forms of iconography ([Carroll, 2009](#); [Lambert et al., 2010](#)), and how these are enacted, interact with, and shape social relations for the benefit of the community. This thesis has observed and analysed resilience within economic systems and through socio-political systems. Resilience should also be interested in systems of culture as culture forms the core of wellbeing ([Stumblingbear-Riddle & Romans, 2012](#); [Wexler, 2009](#)). Although communities need society and economy for functional continuity, *without culture, meaning in life is lost* ([Baumeister, 1991](#); [Geertz, 1994](#); [Phillips, 2009](#)). This research has not analysed culture specifically, but has shown how culture is part of the community story through iconography and historical narratives.

The aim of this section is to propose working approaches and questions to guide a move into 'cultural' resilience.

Approaches to cultural resilience methods that could be adopted include deeper anthropological approaches ([Kuper, 2009](#)), deeper ethnographic studies of culture in adaptive cycles, social learning (extensively adopted in this research) and further views of the vulnerability of culture ([Wilson, 2010](#)). Approaches to resilience research that pay attention to slow-onset changes and stasis in hierarchies and power configurations are critical in situating culture in resilience. This is important because slow-onset change is often 'invisible' and observations of cultural retention and evolution can provide important clues (or proxies) of social change in communities which can expose power configuration changes.

Importantly this should include those who do or not 'have the right' to count as 'credible knowers' ([Arora-Jonsson, 2016](#)) as the 'voiceless' in communities and the importance their cultural and situated knowledge and different ways of knowing. Critically, methodologies that frame place and culture-specific research are important in cultural research such as that undertaken with the Canadian Arctic Inuit by Berkes and Jolly ([2002](#)). Traditional knowledge offers much in informing science through metaphor and embedded knowledge moulded by societal and ecosystem change ([Berkes & Folke, 1994](#)). Deeper historical narratives based on historical texts have often served to shape cultural resilience narratives e.g. in naval ports in the UK, to capture cultural change over time ([Beaven, 2015](#)). Cultural resilience research undertaken in Cornwall, integrating issues of the Cornish language ([Kennedy, 2013](#)) is significant through its adoption of narrative through representational and emotionally focussed research. This is also interesting because the Cornish place and identity narrative through Cornwall's 'new circumstances' of social change in

communities is an important factor in employing culture for research into cohesiveness and resilience ([ibid.](#)).

While this thesis has adopted a mixed method and triangulated grounded theory approach through the CRVI, it has also utilised some aspects of ethnography to achieve its aims through assessments of community knowledge, skills, tools and other resources along with norms, values and other informal institutions. Methods adopted for cultural resilience studies include interviews, managed formal and informal discussion forums with community members, and engagement in participant observation in seasonal cultural events. Studies in Arctic Alaska ([Sakakibara, 2017](#)) have included ethnographic embedding in subsistence activities as a key element of cultural resilience research. This study has engaged with most of these methodological approaches (with the exception of focus groups) as a contribution to the CRVI. This could be further developed to embrace a more focussed approach to cultural research by deeper use of ethnographic methods.

The use of PAR (participatory action research)⁸³ ([Ballard & Belsky, 2010](#); [McIntyre, 2007](#); [Tschakert & Dietrich, 2010](#)) is particularly appealing as it builds on the embedded ethnographic orientated field approach in this research. PAR also introduces closer collaboration with the community in observing their own resilience and vulnerability issues through notions of identity, space and place and notions of wellbeing ([Stumblingbear-Riddle & Romans, 2012](#); [Wexler, 2009](#)) as well as cultural traits such as myths and taboos ([Imperiale & Vanclay, 2016](#)).

Life history interviews have also been used to good effect in cultural resilience research on a deeper ethnographic level, e.g. the feminist discourse of

⁸³ The key features of participatory action research (PAR) include its collaborative nature, its egalitarian approach to power and education in the research process, and its emphasis on taking action on an issue.

intergenerational knowledge loss of ranchers in Arizona and New Mexico ([Wilmer & Fernández-Giménez, 2016](#)) reflected in the gendered role of fisher's partners in this research. The adoption of ethnography, reflective practice, cultural enquiry, companion modelling, agent based modelling and PAR are all considered important in the operationalisation of cultural resilience methodologies ([Adger et al., 2013](#); [Arora-Jonsson, 2016](#)). This suggests a need for closer consideration of further, culturally focussed methodological approaches to augment resilience research.

Cultural aspects of future research could include life history interviews coupled with consideration of space-place identity processes, along with resilience and vulnerability drivers within coastal communities. This would inform analyses of power configurations and self-interest that is currently lacking in many resilience studies. This study has shown some aspects of culture through iconography that has informed the CRVI but could have focused more strongly on the real-lives of other generations and historical and relative community narratives. Such an approach should be more heavily underpinned through adaptive cycle narratives of resilient change. The use of PAR as a collaborative and interventionist approach might be usefully adopted in clarifying and bringing to life to notions of resilience through a cultural lens.

Questions arise surrounding why and how the impact of similar community strategies play out differently ([Pratt, 2015](#)) in communities. Deeper assessments using life-history cultural analyses and system/process approaches can build a view of the particularities and unique characteristics of local cultures and the need to embed policy in values and identity as part of these cultural 'economies'. There is very little research work on cultural resilience in the academic body of knowledge

and this is a weakness in the understanding of these fundamental attributes of community resilience and vulnerability.

9.5 Further resilience insights : status, longitudinal and transformational approaches

Building on Sections 6.8.2. (Point 2) and 7.5.2. (Point 2), consideration of the three notions of status, longitudinal processes and transformation as an approach may build and enrich insights into how resilience analysis might be more gainfully conducted using empirical data.

To recap, status views of resilience reflect the overall status of the community as a snapshot in time (non-dynamic). Furthermore, status is considered as a static concept at the time of measurement ([Béné, Frankenberger & Nelson, 2015](#); [Kafle, 2017](#); [Pelling & Manuel-Navarrete, 2011](#)).

Longitudinal processes can include adaptive changes and tend to be slow-onset as discussed in Section 9.2. The notion of transition or transformation (terms used interchangeably in this research) implies change occurring within an established regime, e.g. a power configuration to convey notions of regime change which may have arisen through adaptation ([Pelling, 2011, p.51](#)). Pelling ([2011](#)) suggests that we know far less about the notion of transformation (or transition) than we do of what a resilient system might look like; however, resilience remains a core 'component' of transformation ([ibid.](#)). Resilience transitions to raise community resilience seems unlikely at the global level as a zero-sum game, and indeed resilience building at the community level may create vulnerabilities within other communities. Hence, the utility and understanding of adaptive cycle approaches is

critical at different scales in understanding pathways and trajectories of resilience change linked to scale ([Wilson, 2012a](#)).

Status, through visual indicators in this research, conveys a fixed view of the resilience and vulnerability of a given indicator at a point in time. They do not describe the multiple adaptive cycle heuristic to any great degree and their interdependencies. There is a common criticism of visual state indicators in that they can draw attention away from (and possibly mask) the underlying important processes at play ([Béné et al., 2012](#); [Brown, 2014](#); [Pelling & Manuel-Navarrete, 2011](#)) as discussed in Chapter 8. It is also suggested that development of ways of gathering and describing processes at a greater granularity than the descriptive approach generally adopted in resilience research is required. This might be approached by working with communities using PAR approaches to gather longer-term views of process cycles, such as changes in dependencies between livelihoods and deeper historical contexts. It might be more fruitful to be able to describe fundamental and even more simplistic cycles experimentally in resilience research and in the adoption of typologies such as the CRVI. The challenge is to describe adaptive cycles using a common language and resilience. Social and development disciplines still have different structural approaches and, critically, transition and transformation are still very under-theorised and malleable concepts as discussed in the previous paragraph ([Pelling & Manuel-Navarrete, 2011](#); [Wilson, 2012a](#)).

This research draws a distinction between traditional methods of longitudinal sampling by replication of field sampling strategies at specific time frequencies and the use of process and proxy techniques as adopted in the CRVI. Proxy and process evidence may be a better research 'vehicle' to assist in describing longitudinal and slow-onset dynamic change when used in a resilience lens. The use of a proxy-

process hybrid approach helps to promote understanding of how communities cope and adapt to change and provides flexibility to observe dynamic resilience processes through the use of resilience concepts such as social learning. Examples of this in this research include the identification of events and ensuing processes such as the movement of fishing from Mousehole to Newlyn and the advent of second and holiday homes as a long-term resilience change process.

Indicator and status approaches nevertheless serve a genuine purpose in identifying resilience and vulnerability factors at particular points in time despite their weakness in capturing the processes and some of the narratives that shape resilience or vulnerability building. Co-representing status and process is important in conveying resilience indicators. More work in the areas of visualising status and process simultaneously would benefit understanding of the roles they play in resilience assessment. This would help to avoid viewing resilience status views as detached from the underlying processes as discussed in Chapter 8.

9.6 Concluding thoughts

This research has unpacked and highlighted both conspicuous and subtle differences between the case study communities initially through a resilience capitals lens and then through the resilience-framed CRVI approach. This has provided a unique insight into the case communities from their common fishing ancestry to contemporary views of fast and slow-onset resilience processes in these communities. Key elements that require attention in future work is a strong focus on slow-onset community change and the framing of power in resilience research. This may help to identify typologies of community processes that can lead to vulnerability-generating power configurations or trajectories that may suggest such onsets.

This study has also highlighted several, interlinked key issues for future research on community resilience, especially in regard to slow-onset change.

First, the CRVI, as a typology, utilises a predominantly status-based approach. In order to focus on slow-onset change at the community level, the use of deeper ethnographic analysis coupled to PAR approaches might further benefit the identification of influential processes unique to, and common across, coastal communities.

Second, the use of thresholds may provide a useful bridge between resilience and sustainability as a combined analytical approach. Transformatory sustainability thinking can result from an enduring and increasing stress perceived as nearing a threshold or tipping point that could have dire implications for the system ([Redman, 2014](#)). Hence, one sustainability strategy is to act to allow the system to reconfigure itself by introducing a new set of dynamics that operate within specified desirable values over the long term as a consequence of encroaching on a threshold (e.g. a global temperature based tipping point). However, transformative actions involve taking substantial risks, often are expensive, and, importantly have more uncertain outcomes than most adaptive actions ([ibid.](#)).

The degree to which future states are emergent in terms of flexibility in order to enhance system robustness and its governance is the goal of transformation actions ([ibid.](#)) This can be equally be viewed as a resilience approach forming a bridge between sustainability and resilience lenses ([Folke & Gunderson, 2010](#); [Olsson et al., 2006](#)).

The 'goal' of resilience is to enable a system to respond to changing conditions so that there are minimal losses to the system and to its essential functioning. External shocks or emergent stresses pushing the system over a threshold may

prompt the changing condition of a system ([Redman, 2014](#)). At the outset of a cycle of change, the end result it is not predetermined and may ultimately resemble the system's pre-existing conditions or be different, i.e., regime shift. Because the outcome of the system moving through an adaptive cycle is not predetermined, interventions are based on incomplete knowledge of impact and that emergent system properties will be desirable. However, process based views tend to adopt incremental change rather than (generally) major, or potentially fundamental change adopted of transformation and issues of scale become apparent in the two lenses ([ibid.](#)).

In this research, challenges such as the slow-onset of second homes in communities could be addressed through long term community sustainability views informed by the resilience processes within these views.

Thirdly, the use of capital approaches has been criticised in this study as inflexible and orientated towards solution-orientated approaches to community resilience and vulnerability. The use of capital approaches does not lend itself well to observations through a resilience lens that views phenomena through processes in contrast to the hard-and-fast solution-orientated metrics associated with capitals. As discussed, a big challenge in the field of resilience is that of gaining traction into the language of policy makers and linked actors that are grounded in solution orientation and metrics rather than the process orientation and intermediate outcomes that are intrinsic to resilience thinking.

An expanded combination of status based and process views of the indicators driving deeper slow-onset and interlinked community differences would thus be a valuable approach in further research on resilience and sustainability in coastal communities. This study has also highlighted gaps in understandings of cultural

resilience in coastal communities. Resilience theory and practice would benefit from further evaluations and syntheses of cultural approaches to resilience in deepening understandings of critical pathways and drivers in resilience.

As Brown ([2014](#)) and Wilson ([2012a](#)) have argued, the application of a resilience lens is strongly underpinned by notions of power. This research has shown that power configurations are a key aspect of resilience, but that power is often expressed in relational ways that are not easily captured by capitals-based approaches. The CRVI has attempted to address this issue in this study and through ideas for further work. This study has also examined the social policy and political factors affecting community resilience in Section 7.4.5, and has highlighted the perils of reductionist thinking that examines community resilience in isolation from these broader structural influences. This is especially important when considering the use of resilience as an assessment tool without fully articulating the implications for processes that underlie status views. Processes are critical in resilience thinking and provide some promise to a better context to unravelling 'wicked problems'. 'Wicked problems' are typically expressed as having incomplete or contradictory knowledge, high numbers of people and opinions involved, a large economic burden, the interconnected nature of these problems with other problems and spheres of self-interest through power ([Ross, 2010](#); [Ross & Berkes, 2014](#)). 'Wicked problems' will no doubt always exist, adaptation to how we approach these problems has been fundamental in human evolution and will continue to play its role in resilience thinking and identifying the processes and actions that undermine it.

Finally, the study has highlighted how internal rigidity and power configurations can 'lock-in' a community and steer it towards a vulnerable trajectory as illustrated in Polperro. The power 'lock-in' did not disadvantage the community over the 'boom'

tourist years while the power configuration became more and more normalised and embedded. When other vulnerabilities arose in the community such as loss of social networks (through second and holiday homes) and the decline in tourism, the embedded rigidity further trapped the community with its associated lack of adaptive capacity and flexibility to cope with these changes.

Appendices

Appendix A : Example residential questionnaire

Social Resilience in Cornish Fishing Communities



Community : Polperro

Survey Reference Number (Please Note This Number)

Please would you help with a research project on perceptions of fishing communities by completing this questionnaire? This survey is part of a PhD research project in Human Geography at Plymouth University undertaken in collaboration with the Cornish Fish Producers Organisation (CFPO). I will have left this form with you if you were unable to complete this form at this time or dropped this into your letterbox with the intention of picking this completed form up at a later date. **You can also leave completed surveys in the drop-box in the Polperro Village Post Office until the end of July 2013.** Leaving the forms in the drop box would be very helpful to me in getting to the surveys returned. Of course there is no obligation at all to complete the form but it would be extremely helpful in my research. The information sheet should be kept by you and the survey returned with the consent form either placed in the drop-box or collected by myself.

This survey explores your opinions about how current and historical fishing activity has influenced the evolution of this fishing community along with its current and future ability to cope with change. Change may be driven through social, economic and natural factors from both within and outside this community such as housing costs, fishery quota and community changes. I am genuinely interested in your views concerning your community. These views are really important in helping me understand how this community (and others) may increase their potential to cope with change.

Contact details : Huw Thomas, huw.thomas@plymouth.ac.uk, mobile 07891 978 643

Section A : This section explores your relationship to this fishing community
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A1. Which of the following best describes you ?

Full time local resident ☐ Part-time local resident ☐

A2. How long have lived in this community on a part-time or full time basis

Less than one year ☐ 1-5 years ☐ 6-10 years ☐ 11-20 years ☐ 21-30 years ☐

30+ years ☐

Section B : This section explores your general opinions of this community						
		Statement	Strongly Agree	Agree	Disagree	Strongly Disagree
B	1	I can sense a pride and identity when I observe the fishing history culture of this community				
B	2	This community is what I think of when I think of a fishing community				
B	3	Heritage resources such as architecture and the harbour infrastructure must be preserved				
B	4	The experience and knowledge of fishing men and women should be preserved				
B	5	The fishing heritage of this community should be preserved to promote tourism				
B	6	The restaurants in this community reflect the fishing heritage of this community				
B	7	Fishing heritage should be preserved to maintain the identity of this community				
B	8	Commercial fishing activity visually dominates this fishing community				
B	9	The imagery of the shops and galleries in the community reflects fishing heritage				
B	10	The harbour architecture visually dominates this fishing community				
B	11	Change in this fishing community probably happens slowly				
B	12	This fishing community has affordable property prices for local Cornish people				
B	13	Fishing heritage is probably good for this community				
B	14	Property prices are affordable for the children of families who have been in the area for many years				
B	15	Marine fishing, past or present contributes to the character or sense of place of this community				
B	16	Art is an important factor in expressing the character of this fishing community				
B	17	Social values are an important factor in preserving the identity of this community				
B	18	Commercial fishing is subsidised by the European Community in this area				
B	19	Tourism is subsidised by the European Community in this area				
B	20	Local businesses use the fishing heritage of this community to promote their businesses				
B	21	Young people should be encouraged to take up commercial fishing				
B	22	Marine fishing is a very dangerous form of livelihood				
B	23	Everybody has the basic right to go out and catch marine fish and shellfish				

Section C : This section explores your opinions of the heritage of this community. Please provide as much detail as you can in your response and please do continue on additional sheets if you wish to expand on your views

C1. How would you essentially describe the identity of Polperro ?

C2. How would you describe your personal attachment to Polperro ?

C3. Would you say you had a deep-rooted personal attachment to Polperro due to its fishing activities ? Do you feel you have any other social/other attachments to Polperro as part of its 'sense of place' ?

C4. Do you think the handing down of fishing skills between generations is encouraged and valued as a way of life in Polperro ? Should it be valued if it is not ?

C5. Many places are described as ‘fishing communities’, what would you say is important in defining the nature and character of Polperro as a ‘fishing community’ ? (for example, fishing festivals, heritage, community identity, social history)

C6. Would you say that Polperro promotes a sense of romanticism towards its fishing heritage as an important factor in its tourist attractiveness ?

C7. Do you think that fishermen are given a ‘fair deal’ by the UK and European Governments in the maintenance of their livelihoods through fishing activities ?

C8. Would you say that Polperro is a single community or a mix of many communities, if a mix, could you describe the essence of this mix ?

C9. How does the sea itself contribute towards the 'sense of place' of 'Polperro'

C10. Do you have any other comments about the questions in this survey or can you think of questions perhaps I should have asked ? Or indeed any general comments would be appreciated.

Section D : This section requests more details to assist in the interpretation of this survey's results

D1. What is your age ?

18-28 ☐ 29-39 ☐ 40-52 ☐ 53-64 ☐ 65-78 ☐ 78-89 ☐ 90+ ☐

D2. What is your gender ? (Apply later)

Male ☐ Female ☐

D3. What is your highest level of education ?

GCSEs ☐ A levels ☐ Degree ☐ Higher degree ☐ NVQ or equivalent ☐

No formal education ☐ Other ☐

D4. Which of the following best describes your employment situation in this community

Fishing Vessel Skipper/Owner ☐ Fisher ☐ Fishing industry ☐ Eco-tourism ☐

Heritage Arts/Culture ☐ Tourism Education ☐ Government ☐

Other ☐ (please specify: _____)

PLYMOUTH UNIVERSITY

FACULTY OF SCIENCE AND TECHNOLOGY

CONSENT TO PARTICIPATE IN RESEARCH PROJECT

Name of Principal Investigator – Huw Thomas

Title of Research – Resilience in Cornish Fishing Communities

Brief statement of purpose of work

This research is focussed on Cornish fishing communities and their ability to maintain their identity and prosperity as fishing communities in times of adversity. Fishing communities may be in a transitional state between the act of active fishing and the use of fishing as an 'icon' reflecting a communities fishing heritage. The objective of this research is to examine how various fishing communities have developed 'coping strategies' to change imposed on the community both internally and externally. This might include economic pressures such as recession, environmental change such as fish stock availability, and social change such as learning and skills handed down over generations.

The objectives of this research have been explained to me.

I understand that I am free to withdraw from the research at any stage, and ask for my data to be destroyed if I wish.

I understand that my anonymity is guaranteed, unless I expressly state otherwise.

I understand that the Principal Investigator of this work will have attempted, as far as possible, to avoid any risks, and that safety and health risks will have been separately assessed by appropriate authorities (e.g. under COSHH regulations)

Under these circumstances, I agree to participate in the research.

Name:

Signature:
.....

Date:

Semi-structured Interview Guide – Community Members

INTERVIEW PLAN

Introduction of interviewer

- Introduce myself, brief background and how long here for and the scope of the research (ESF, CuC, timescales)
- During the interview, I would like to discuss how social, economic and natural factors have influenced changes in the Mousehole community (in both recent and contemporary times). This is with specific reference to Mousehole's ability to cope with change both internally and externally
- Why – this research is taking place to
- What we are going to do
- Timescales
- What is going to happen to the information stemming from this interview
- With these topics in mind.....

<u>Main Questions</u>	<u>Additional Steering Questions</u>	<u>Clarifying Questions</u>
<u>Social</u>		
	•	
1. How important is preserving the cultural heritage of fishing in Mousehole ?	<ul style="list-style-type: none"> • Architectural considerations ? • Restaurants/Shops/Art ? 	<ul style="list-style-type: none"> • Some people have told me ? • I'm not sure ...but ? • Can you give me some examples ? • Can you expand on this ? • What is your deepest concern ...?
2. How have changes in the composition of the community influenced the 'sense of place' or identity of Mousehole ?	<ul style="list-style-type: none"> • Has second home ownership influenced the identity of this community ? • Migration of extant community ? 	
3. How important is leadership in ensuring this community prospers ?	<ul style="list-style-type: none"> • Who might be construed as being leaders in this community ? • How do these leaders influence change ? • How does this community view itself ? 	
4. How influential has trust, kinship and self-esteem been in binding this	<ul style="list-style-type: none"> • Was this important in working together in times past ? • Is this a set of communities or 	

community together?	one integrated community? <ul style="list-style-type: none"> • Are these a core aspect of fishing communities ? • Has there been a transition to a different social value system ? • Has this community developed coping strategies to internal and external changes • Can you identify elements of change over the short and long term ? 	
Economic		
1. I am told that fishing community members have often had multiple jobs in the past and indeed now, can you expand on this ?	<ul style="list-style-type: none"> • Historically this was mining, farming and fishing, how has this changed? 	<ul style="list-style-type: none"> • Some people have told me ? • I'm not sure ...but ? • Can you give me some examples ? • Can you expand on this ? • What is your deepest concern ...?
2. How have the expectations of young people changed ?	<ul style="list-style-type: none"> • Do young people migrate for financial reasons ? • Is the cost of housing a significant feature in the expectations of young people 	
3. Has government policy benefitted this community in general terms?	<ul style="list-style-type: none"> • How influential is local and central government in this community ? 	
4. Can you describe the key economic threats to this community?	<ul style="list-style-type: none"> • Threats ? • Property prices ? • Type of threat ? • Fast and slow onset ? 	
Natural		
1. How important is the architecture of this community ?	<ul style="list-style-type: none"> • How do the architectural qualities of Mousehole reflect its fishing heritage ? • How evident is eco-tourism ? Is it important ? 	<ul style="list-style-type: none"> • Some people have told me ? • I'm not sure ...but ? • Can you give me some examples ? • Can you expand on this ? • What is your deepest concern ...?
2. How crucial is it for this community to have the right to fish commercially ?	<ul style="list-style-type: none"> • Conservation of heritage • Identity 	
3. Is the environment critical to tourism in Mousehole?	<ul style="list-style-type: none"> • Landscapes ? • Seascapes • Heritage environment ? 	
Conclude interviews with general questions		
<ul style="list-style-type: none"> • Go back over incomplete or questions which need more clarification • Is there anything further that you feel is important ? 		<ul style="list-style-type: none"> • Make sure conclusion blends in and no loose ends left out there
<ul style="list-style-type: none"> • Wrap-up – grateful thanks and wrap up with conclusions of what has happened in interview 		

Appendix C : Social network topologies

Social Network Typology	Network Characteristics
Socially excluded or truncated network	Limited to small number of groups and a small membership within these groups, business networks excluding social aspects
Homogeneous network	Relatively small number of membership groups with extensive contacts within these groups. Predominantly local extended families plus small number of friends and neighbours. Members know each other and networks are dense
Traditional network	Composed of families, old school friends, ex workmates, neighbours, predominantly intergenerational and historically local people and families
Heterogeneous network	Open network of dissimilar people in terms of age, employment, status or occupation, loose knit, members less likely to know each other. Some may be different from neighbours e.g. not born locally
Network of solidarity	Wide range of membership groups of similar and dissimilar people. Shares many of the characteristics of traditional and heterogeneous models (strong local family contacts and local friends, plus participation in formal and informal organisations. Residents have a wide range of reference groups)

Social network typologies - Source : after ([Cattell, 2001](#))

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